

Ex LIBRIS
UNIVERSITATIS
ALBERTAENSIS



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Skilled Beef-making.

This is a season of the year in which fat stock and the men who raise it are more in evidence than cultivation questions, and this year more so than ever. Exactly two years ago a young man down in Illinois started to raise a couple of Polled Angus calves that have since made more money than any butcher's beasts on record. The year before, a bullock fed on the Windsor farm of Queen Victoria sold after winning the championship of Smithfield, at \$750. The steer Advance, champion at Chicago, fed by S. B. Pearce, sold for \$1.50 a pound, or \$2.145 for the 1,430 lbs. he weighed at 23 months old. The weight for age was not extraordinary in a beast that won in such a contest. Lord Rosebery's 23-months-old Shorthorn weighed 158 lbs. more, and the champion Hereford steer, the same age, weighed still more.

The great point of interest in the Pearce victory was that he was able to win first and reserve with two steers from the same stable with all the world against him.

At the same show, R. H. Kerrick, another Illinois man, was first with a car load of steers, also Polled Angus, which brought \$15.50 per cwt., and were justly regarded as triumphs of skilled feeding. Every man that has a proper interest in the art of stock feeding will want to hear how such honors and rewards were earned. There is no trick in that line of business. The older man has been there before and will be again if he lives, and when questioned a year ago as to his methods of fattening, said, "I do not fatten cattle. I grow beef." There is a greater distinction between the two things than most people see. You go into the Christmas market, for whose display most of the prize cattle are reserved, and see four or five inches of solid fat covering a moderate amount of lean, and you are pretty certain that most of that fat is next to valueless. Nobody wants to eat it. It is the amount of lean meat on that or any other beast that constitutes its main value. And if by bad methods of feeding or by feeding for show long after the point of feeding for usefulness is past, we get masses of tallow instead of juicy lean meat, we are setting an example that ought to be avoided instead of one to be held up for intelligent admiration and imitation.

It is interesting in this connection to follow the champions to the block. It is the easiest thing in the world to see a champion on foot get the prize at the carcass competition. The very best of these carcasses are too fat. And the older the beast the more is it liable to go to unprofitable fat. The younger it is the more it is likely to have that preponderance of lean that constitutes its best value. And here lies the force of Mr. Kenrick's statement. With him the feeding and the growing go hand in hand, because, as every observant feeder knows, there is much less tendency to laying on undue excess of fat during that period than at a later stage. Mr. Kenrick's methods may not be the best

to take in this district, but everything does not depend on the way of feeding. We must get farther back than that. Good feed put inside a good skin is the strong point in every kind of stock feeding. Even if we go no deeper than the skin, we can see, or rather the man who is to succeed as a feeder must see, that his beasts are all good handlers. He will also go deeper and look for fine bone as well, which is another evidence of fitness for profitable feeding. With that as a starting point, he will start to put in his best work and keep on doing so till he has reached the result which his trained intelligence has always had in view.

Mr. Kenrick is a pleasing example of ripened skill in the art of stock feeding, but the younger man who got in ahead of him and others is worthy of honor, for all the good ones could not win. He said of himself the other day: "My steer won on my 28th birthday. I had hoped to be as successful in twenty years from now, but it came much sooner than expected. I love the work of raising and feeding and caring for cattle. It never mattered how late it was or how much was going on around me. I never neglected the cattle. I can tell your readers that it is not pampering and blanketing or the feeding of patent

poor feeding as by over-feeding, but the paying beast is the one that can take the most out of what is put before it.

Some day, when we get down to fine points, we will see the value both for feeding and flavor of a few roots along with more concentrated feeds, and govern ourselves accordingly. The table is the final test of quality, and fifty years hence, and perhaps less, the diner-out will be called in to help the butcher to decide which is the best beast. We don't know it all yet.

We don't need to go to the States for examples and instructors along this line. Simpson Rennie, his works and ways are a study for every Canadian, and every young man who aims at successful feeding should read, ponder and practice what he so ably teaches by precept and example.

High Stepping Medicine.

The row raised by Lord Durham about suspected drugging, or "doping," of race horses by American jockeys riding on the English turf, was by some attributed to international jealousy. But the same trouble has since broken out in a new place. At the great New York



Prize-winning Lincolns

(Life Photograph.)

At Winnipeg Industrial, July, 1900. The property of W. T. Lytle, Beaconsfield, Man.

foods that made the two great steers Good Times and Advance, but it was breeding and careful attention, natural care and feeding. They were good ones to begin with and were handled in a natural way, not overdone."

There is a great deal in these simple sentences. The man's heart was in his work, and beginning with the right sort, he persevered along the lines which his trained judgment had selected as the surest road to ultimate success.

It may not be desirable here to follow the exact methods that are found profitable in Illinois or Scotland, but we can learn there the principles that should guide us. The best bred calf can be spoiled by irregular feeding. And the feeder should know the fitness of what he feeds for its intended purpose. One thing is sure as gospel writ. You cannot make up by a whole week's extra care what is lost by two days' neglect. A stunted beast, for example, will take a year's more keep and four times the feed to regain what it lost in one month of mean or careless treatment.

It should also be clearly understood that stuffing all they will eat is not skilled feeding. "Enough is as good as a feast," and for ultimate results a great deal better. Feeds properly selected and varied are what build up. A beast's digestion may be as much injured by

Horse Show, held the other day at Madison Square Gardens, one wealthy sportsman, owner of two of the finest carriage horses shown, was overhauled on suspicion of applying to them "high-stepping medicine." The dose was supposed to have been too strong for one of the horses and its conduct in the ring led to an investigation. A "mild wash" applied to the legs of those horses was found to contain ingredients such as ammonia and similar irritating drugs calculated to stimulate excessive action. Others had at previous shows been reprimanded for applying stimulants to the legs of their horses for the same purpose. A favorite blend of "high-stepping medicine" is tincture of capsicum and chloroform, but turpentine, ammonia or any such powerful skin irritant answers the same purpose. An overdose is likely to make the animal wild with pain and dangerous to handle.

If, on the other hand, the horse is too spirited or headstrong to be readily controlled, he sometimes gets "knock-out drops," such as chloral, to tone him down.

The Western Stock Growers' Association has paid out \$1,468 in wolf bounties since the 1st of April last.

The Secret of England's Pre-eminence in Stock Breeding.

England owes its pre-eminence as a great stock-breeding country, among other things, to two principal contributing causes. The first cause is the fact that a great part of the development of live-stock breeding in England has been carried on by a class of farmers whose likes are to be found nowhere else in the world; men with money and social distinction, who are willing to spend their money for the sake of maintaining their social distinction, and who know very well that there is no policy or line of conduct which will gain for them more credit with the rank and file of the English people than to live in country homes, and be the successful patrons of rural pursuits. To glance over an English stock show prize list, or to look through the advertising columns of an English live stock paper, is sufficient to establish the fact that the great majority of the live stock breeders of England, who are in the top rank, are *men of money and means*, who follow farming not as a business, but as a *fad*, an honorable and worthy fad though it be. The *ordinary* English farmer is like his mate anywhere else in the world—as slow to improve, as slow to give up grain growing and become a specialist in the raising of pure bred live stock, as any Canadian or United States farmer is. The second cause that has contributed to England's pre-eminence in the production of live stock is the fact that the English, from their natural fondness of live stock (for which let all honor be given them), were the first in the live stock field. For years and years they had it all their own way. This is no longer so. Every progressive civilized country in the world is now rapidly developing improved methods of live stock breeding.

Stumbling.

The horse that stumbles should not be whipped for the accident. He may stumble because he is badly shod. He may have a nervous disorder that occasionally causes him to lose control over one or another part of the nerves that are used in his complicated work of walking, trotting or running while pulling a load or holding it back. Whatever may be the cause of his stumbling, whipping the stumbler will do no good. The horse does not stumble for pleasure or through design. Stumbling is painful to him. Just why he should be tortured with a whip after his whole nervous and muscular system has been wrenched in a stumble and a struggle to keep his feet no one can tell. The whipping comes after the accident. The horse does not understand that the stinging lashing is a warning to him not to stumble again. He regards it merely as an added torture.

A case of damage to cattle done by a barbed wire fence was heard by Judge Morgan, at Markham, Ont., recently, and the decision given may interest farmers and others who are using that kind of fencing. His Honor decided that barbed wire fences were a public nuisance, and if placed along a side-line or road, the party owning them is responsible for damage done to cattle. In this case he assessed \$10 and costs.

The Draft Stallion for Manitoba.

The other day the members of the Manitou Agricultural Society came to the resolution to try to get a good draft sire for service in that district the coming season. There are much greater difficulties in the way of raising good colts than in raising most other kinds of farm stock. If you have made a mess of your breeding or crossing of cattle beasts, the butcher can wipe it out in six weeks if you are so minded, and even your next neighbor need never know why you vealed that calf. Even if the get is to live the three years usually taken here to make a butcher's beast, there are so many ordinary cattle all around that its shortcomings are never or scarcely ever noticed.

But it is different with a colt. You have perhaps been an oracle when somebody else had a mean colt or had a good one crippled or disfigured for life by running against a wire fence or entangling its pasterns in a loose wire that he was too busy or too careless to fix properly, and when your turn comes, the neighbors naturally expect to see something worth making a note of. Then there was that city oracle who told you that it was as cheap to grow a three-year-old colt as a three-year-old steer, and you have somehow got to think the same way.

Then the proper breed of sire must be studied and discussed. Somebody that reads the English papers tells you the marvellous prices got for Shires, and somebody else has seen a Percheron colt at two years old that looked better than a Clyde at three.

Then the general purpose horse is always wanted on every farm, and you want something a shade better than a mere cart horse, and the sire to produce such a beast must be fully discussed before you commit yourself to the patronage of the various light-legged sires in the neighborhood. That Standard bred is 2.25 or thereabout, and that Cleveland bay has a score of red tickets, and perhaps you decide for the red tickets as your final choice. If we might make the suggestion, there is not much more of probable future advantage in a Manitoba farmer breeding from such sires than if he were to buy Bohemian oats. Look round your district and see how many horses there are that can neither be classed as horses nor ponies and try if you can to find out how these things were bred. If you live near Manitou, you might interview William Baldwin about those two old general purpose horses he has owned for some time now and get him to tell you how they were bred and how they have suited him. If you are anything of a horseman, and the means are within your reach, you might try and breed a few more of the same sort.

If you are a horseman. There lies the main secret of horse breeding. A very ordinary man may raise ordinary cattle, but it takes a horseman to breed and raise horses. If you have the faculty in you, the next point is to study the build of your mares and the sort of colt you want from them. If they do not "nick in" with the sire you patronize, the outcome will be as a rule a very ordinary brute. The abortive attempts at colt breeding and rearing that have been made in this country the last dozen years have been due far more to the defects in the mares and the men who own them than to the sire. The sire himself may be either better or worse for breeding purposes than he actually looks. Just how much he is worth as a sire it may take five years to fully decide. That has been true of the greatest sires in all kinds of stock. Anthony Cruickshanks, that prince of breeders, was once so unfortunate as to put the most valuable sire he ever bought to none but his second class cows, and found out too late what a blunder he had made. But for our purposes a horse of medium size, compact build and not known to any veterinary practitioner as a patient, is as good as we can expect for the fees we care to pay for his use. For our purpose the horse that would take a red ticket at Chicago is not the

one to be desired even if we could get him at a reasonable price. In the old country there has been a standing controversy between the Shire and the Clyde as a heavy draft horse. By that is meant usually a lorry horse, one that on the streets of Glasgow or Liverpool will draw the heaviest load. That point was pretty effectually settled the other day at Chicago, on a neutral field, when George Moore, of Waterloo, Ont., with half a dozen Canadian Clydesdale geldings cleared the field from end to end, and an old horse of the same breed from Liverpool was put first over all America. But we don't want to raise a lorry horse for export. That is a thing more suitable for Ontario breeders. What we want here is a farm horse not too heavy nor too light for the land he is to work on. Heavy land will call for a heavier horse. Weight suitable to local requirements, and free action is what we want here and a moderate sized Clyde is the best in sight. One proof of the prevalence of this faith is the number of horses of Clyde type as compared with those from any other kind of sire.

Sires of that breed greater in quality than bulk are what we want here in greatest number, and judging from observation of their number already in the field such is the opinion of the great majority of the farmers of the west. Whether you think with us or not, the question is an open one and very seasonable, and if you care to speak out on the subject, now is the time. We shall be glad to hear from you.

Treatment of Horse Colic.

Forty years' practice as a country physician has compelled me to give advice for the farmers' sick animals, says Dr. A. G. Chase, Kansas. Whisky is the very worst thing that can be given, unless it is bicarbonate of soda. The only remedy that need ever be given, if used in any reasonable time, is spirits of ether. One-half ounce of this in a pint of warm water sweetened, repeated in half to three-quarters of an hour if needed, is all I have ever found necessary. I never lost but one case, and in that one a half pint or more of whisky had been given a couple of hours before I saw the horse, which died within five minutes of my arrival. In the absence of the ether, 2 oz. of sweet spirits of nitre may be used with equal success. This is the spirits of nitrous ether and may be given in warm water as with ether. In the absence of anything better, hot water internally and externally is proper treatment.

Like causes produce like effects all the world over. The New Zealand Agricultural report, speaking of the sale of horses for remounts in the Imperial army, says: "In districts where strong Thoroughbred sires had been used many excellent animals were got, but where light weedy thoroughbreds, or sires with trotting blood in them had been used the number of suitable remounts obtained was small. Horses of the latter type appear to be predisposed to ringbone."

The experiment tried by the United States government to acclimate reindeer in Alaska has resulted in failure. Three years ago 500 reindeer in charge of a party of 15 Laplanders were sent to Alaska. Of this party four returned recently, all that were left. The leader said: The country did not suit either us or the reindeer. It was cold enough, but it was different in other ways. The deer did not get the same things to eat that they did in Lapland, and they did not get the same treatment. When we arrived in Alaska, the deer were distributed, and each of us went with a certain number to a certain place. The men who worked with us did not know the habits of the animals and could not treat them as they should have been handled. I do not know why the country proved so unhealthy for Laplanders. Anyhow, it killed the most of our party.

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Having a large connection amongst many of the foremost breeders in Great Britain, I guarantee to supply pure-bred Horses, Cattle, Sheep and Pigs of any British breeds for exhibition or breeding purposes on the most favorable terms. Satisfaction guaranteed. Prices on application. P. O. Box 483.

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STALLIONS & COLTS from the best blood in Scotland and Canada.
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BEST MILKING STRAINS with good teats.

TERMS REASONABLE.
A visit to Thornciffe will repay you.
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PIONEER HERD OF SHORTHORNS.

I have been breeding Shorthorn Cattle right here for over a quarter of a century. I breed my own Show Cattle, and last year had at the Winnipeg Industrial the Gold Medal Herd. First for Bull and two of his get, and first for Cow and two of her progeny. I usually have stuff for sale and am always pleased to show it.
WALTER LYNCH, Westbourne, Man.

Cattle for the Farmer.

Read by Prof. Thos. Shaw at the Annual Meeting of the Minnesota Live Stock Breeders' Association, January 8th, 1901.

This paper will not for one moment discuss the question as to whether the farmer should grow cattle, or not, up-

Suppose, however, that the farm is mainly composed of rugged land, similar to that which forms the bluffs along the Mississippi, and that the soil is light. The production on such land will not be nearly so abundant as on the level and rich prairie farm. It would be a mistake to introduce a ponderous breed on such a farm. A light breed, such as the Devon, for instance, could readily climb the bluffs and gath-

months would be sold for fattening on farms where the necessary foods can be grown. High grade Galloways fatten well and produce meat that is eagerly sought in good markets. On the second class of farms named, the Aberdeen Angus would probably prove the most satisfactory, because of the excellence of the meat produced. But when grown under such conditions, the aim should be to grow meat of the best quality. The young animals should be pushed along from birth and put upon the market at from 24 to 30 months. They should never be allowed to stand still in growth or to become lean in flesh. This means that they must get all the supplemental food they want, and varied in kind, and whenever they need it. The profit comes through the excellence of the meat product and the good price it brings because of high finish. Only the skilled feeder can grow such meat.

CATTLE FOR MEAT AND MILK PRODUCTION.

Cattle kept for meat and milk production, or for milk and meat production, as the case may be, in the judgment of the writer, always will be the class of cattle that will predominate on the average farm. Especially will this be true of farms rich in production, and more particularly will it be true of those large enough to maintain from ten cows upward, or even a less number, so that a cream separator can be kept upon the farm. There are several reasons why it should be so, the chief of which are the following:—

(1.) Good milk production and good beef production are not incompatible in the one animal.

(2.) Growing animals for milk and meat will ensure the more profitable consumption of all the varied food products grown upon the farm.

(3.) Maintaining such cows and milking them by hand will be more profitable relatively than growing beef cattle only, where the calves suck the dams.

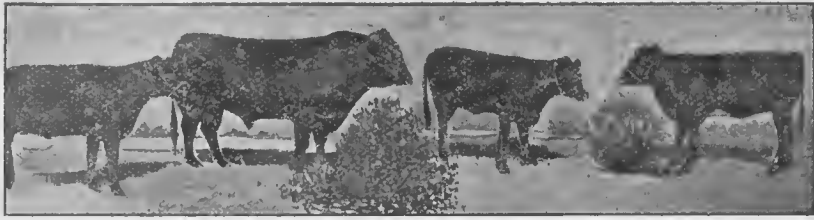
(4.) Such a system of cow keeping is a necessity to keep in equilibrium the production and market values of dairy products.

Each of these propositions may easily be demonstrated, but to do this here would unduly prolong this paper.

These cows, that is to say, dual purpose cows, never stood higher in favor with the average farmer than they do to-day. The cry for more of them has gone up from Lake Superior to the Gulf and from one side of the Mississippi basin to the other. It is even bringing renovation to the cow-keeping methods of the farmers beside the Atlantic and Pacific. A tidal wave is sweeping all down the Mississippi basin in favor of the dual purpose cow, and it is carrying on its bosom toward the Gulf, like driftwood, the teaching of those men who taught that the dual purpose cow was a delusion, a myth and a snare. In the face of this tidal wave, let the men who taught those things come out of their hiding places and try, if they can, to arrest the overflow.

But what is this dual purpose cow? She is a large animal, or fairly large, according to the conditions under which she is to be kept. She has a large, deep and capacious barrel, with ribs not too closely spaced, nor too downward in their spring. She has a refined head and neck, inclining to length, and limbs inclining to fineness. Her crops are moderately wide above, and she has good width through the heart. Her hind quarter is long and wide and deep, straight on the sides and rear, wide at the pin bones and fairly open in the twist. Her udder is large, well quartered, has medium suspension and conveniently large teats, and her milk veins are long and tortuous, all the better if branched, and enter the body through large orifices. In other words, she is a good, thrifty, well-organized animal, whose milking powers are not destroyed by obesity and whose constitution has not been weakened by skeleton-clothed development.

So much for her individuality, but what of her breeding? Why, she has come from dams, who for at least several generations have been good milkers, and from a sire whose immediate

**Prize-winning Shorthorns.**

[Life Photograph.]

The property of Geo. Allisou, Burnbank, Man.

on his farm. To farm without live stock is so completely at variance with the proper maintenance of fertility that such farming will not even be considered here. On the assumption that every farm in Minnesota should have upon it its quota of cattle, the question to be considered is what kind of cattle shall be kept. This question cannot be answered with too much care, since on its determination will depend to a large extent the measure of the success that will attend the keeping of cattle upon the farm.

ADAPTABILITY TO NATURAL CONDITIONS.

The adaptability of the breed to be chosen to the natural conditions of the farm is the first thought that should engage the attention of the farmer. His natural tastes should unquestionably be made subservient to this idea. If those natural tastes are in accord with the natural conditions of his farm, it will be strange indeed if he does not succeed. If they are not, then it is almost certain that failure will follow any attempt that he can make to introduce a breed into a locality where the environment is not suitable and where possibly it is even at variance with the needs of the animals thus chosen.

No greater mistake is made by the average farmer who grows cattle than the little consideration that is given to adaptation; with the many, the paramount question is, "Which is the best breed?" It ought to be "Which is the best breed for my conditions?" It may be possible for a man to change or modify adaptation in a breed, but to do that will take generations of careful breeding and feeding. But why should the energies of a lifetime be thus expended on the modification of a breed, when one of the many breeds now in this country will exactly meet the needs of the farmer? Life is too precious to waste it thus.

Wherever the land is level in character, the soil rich, and fodder and grain production is abundant, the large breeds can be maintained with profit, and usually they can be maintained under such conditions with the highest profit. It may not be easy to verify such an assumption by the facts of actual demonstration. That large breeds, however, are usually kept under such conditions is at least a presumptive proof that the farmers have found them more profitable than the small breeds. It is also highly probable that large animals, under the conditions named, can be relatively more cheaply maintained than small ones. For instance, suppose one cattle beast large in size produces as much as two small ones of an equal combined weight, it will be maintained more cheaply than the two small animals, especially in a cold climate, since more food will be consumed in driving the machinery of two living organizations than in driving the machinery of one with equal capacity to the two. A large breed will be the best, therefore, for such conditions, other things being equal, whether the farmer seeks meat, milk, or the two combined.

er food, whereas a ponderous breed, like the Shorthorn, could succeed only in carrying their heavy bodies over such land by labored effort; while, therefore, the former, a small breed, would almost certainly succeed well under such conditions, the large breed would not prove a success.

Then, again, there are farms that are intermediate in character. They have pasture lands upon them that are undulating and in some instances hilly. They also have upon them level stretches, where plentiful food supplies may be grown with which to sustain them in winter. Here, then, are conditions suited to the maintenance of the intermediate breeds, as, for instance, the Red Polls or the Ayrshires.

Where protection cannot be furnished the natural hardihood of the animal is an important factor. But under farm

**Group of Prize-winning Shorthorns.**

[Life Photograph.]

At Winnipeg Industrial, July, 1900. The property of G. & W. Bennie, Castleberry, Man.

conditions, it is not so important relatively, since a measure of protection can usually be furnished suited to the needs of the breed. It is not to be understood, however, that hardihood in breeds, even on the arable farm, is not an important consideration.

CATTLE FOR BEEF PRODUCTION.

On a given area of farming land it will be found that, even under existing conditions, when the prices of beef are relatively high, a greater profit can be obtained from cattle kept for milk or for milk and meat than for meat only. But the fact remains that even on some arable farms, if cattle are to be grown at all, they must be grown for meat production only. The conditions that relate to labor are such that cows cannot be milked, nor can the milk be cared for in the best fashion. Some of these have relatively large areas for pasture, as in the northern part of the State, and on others the pasture area is limited, although other food is grown in great abundance. Under these conditions, which breeds should be kept? Four breeds will fill the bill reasonably well, but not equally well. These are the Shorthorn, Hereford, Aberdeen Angus and Galloway. Under the conditions first named (that is, when the areas of pasture are large and of cultivated land small), Galloways will probably fill the bill better than the others; especially will this be true where the animals are considerably exposed in rough weather. The dams may be of mixed breeding, the sires being Galloway. The young animals would suck their dams, and at 18 months or at 30

Should the dairyman try to grow his steers into beef? Emphatically no, if they are from dairy sires. He may grow them into veal or baby beef by feeding them on skim-milk and certain adjuncts, selling them between the ages of six and nine months, or a little later in the case of Holsteins, but he should not try to mature and finish them as beef steers are matured and finished, unless he is anxious to get rid of his money. But, if the dairyman has grade cows of mixed breeding, and does not care to rear any calves for the dairy, and is, moreover, desirous of growing meat, he can do so by using high class, pure bred sires of some beef breed. The progeny will then be so pronouncedly beef in form that they can be grown profitably for meat, even to the age of two or three years.

**Rock Lake and Maple Duke.**

[Life Photograph.]

Prize-winning yearling Herefords at Winnipeg Industrial, July, 1900. Bred and exhibited by John Wallace, Cartwright, Man. Rock Lake was second in the two-year-old class, being shown in a class above his age. Maple Duke was second to the sweepstakes bull.

ancestors on the female side were likewise good milkers. This fact has been entirely overlooked by the men who have tried to exterminate the dual purpose cow. They failed to discriminate between the scrub cow and the dual purpose cow. They either did not know the difference, or, what would be worse, they did not want to know it. Charity in judgment, of course, points to the former conclusion. And, what is more unfortunate, some experiment station investigators have made the same mistake. They have first sought out dairy cows with ancestors of approved dairy form and function, and against these they have chosen scrub cows, neither one thing nor another under the delusion that they had dual purpose, and they have given the results to the world as a comparison between the production of the dual purpose and the straight dairy cow. These good men were honest in their intentions, they would not for the world lend themselves knowingly to the propagation of falsehood; nay, they would doubtless scorn to do so! Their mistake was one of narrow range vision. They grasped a quarter truth and imagined it was a whole truth. In this fact a sufficient explanation is found of the apparent conflict of results obtained on this question from certain of the experiment stations. Some of them had dual purpose cows to experiment with, and some of them had not, but thought they had.

Which breeds furnish these dual purpose cows? The Shorthorns do in largest numbers, pure and in the grade form, for one reason, among others, that Shorthorns are by far the most numerous in the land. And the place for the dual purpose Shorthorn is on the arable farm, rich in productive power. And the Polled Durhams can be classed with Shorthorns, since they are essentially the same in their leading characteristics. Second in order come the Red Polls, not placed second because they are in any way inferior to the Shorthorns as dual purpose cattle, but because they are less numerous. They are a little less in size than the Shorthorn, and in the judgment of the writer should be kept so; hence their best place will be found on farms undulating and with fairly good production. The Brown Swiss are also good dual purpose cattle, with a leaning to milk. They have ample growth for beef production, but their strong bone development is somewhat against them for producing the highest class of beef. They are large cattle, and are therefore adapted to conditions in which the production is abundant. The little Devons are good dual purpose cattle, with a leaning to beef. Their place is on hilly farms, with a proportion of bottom land for growing winter food. These animals, with their neat limbs and smooth, pony-like frames, dress well on the block and make an excellent quality of beef. Dual purpose cows may be obtained by taking large dairy cows of mixed breeding and crossing upon them Shorthorn, Polled Durham or Red Poll bulls from good milking families. In two or three generations of careful breeding the dual quality will assert itself.

HOW TO PRODUCE DUAL PURPOSE CATTLE.

Taking conditions as we find them, how is the dual purpose cow to be bred? Some say, take a good straight dairy cow and cross her with an extreme beef bull (that is one extreme in form and high in breeding). If the breeding is high on both sides, neither man nor spirit can tell what the result will be, for the reason, first, that the relative strength of the breeding cannot be accurately known, and second, because of this the relative strength of the prepotency in either parent cannot be known. The progeny may incline strongly to beef or to milk, or it may be a compromise. Mate such a bull with a dairy cow of excellent performance, but whose breeding is much mixed, and just as sure as the sun travels westward in the sky, the progeny will incline to beef. It cannot be otherwise. The prepotency of the bull will be far greater than that

of the cow, because his breeding is pure and hers is mixed; in other words, because his power to effect change is far greater than her power to resist change. If men follow such teaching in breeding dual purpose cows, there can be only one termination to their effort, that is to say, the ditch. Anybody who is thoroughly conversant with the principles that govern up-grading does not require to be told this.

How, then, shall the dual purpose cow be bred? Select large, roomy-bodied cows; secure bulls inclining to the pronounced meat form to maintain stamina for crossing upon the cows. These bulls should be from dams in the near ancestry of which were good milkers. Feed the heifers in such a way that their milking powers will not be injured. Eliminate all milk producers below the desired standard as soon as the fact is known. Persistence in such breeding will give the country such dual purpose cows as have not been seen in the land.

Happily for the farmers of this country, the teaching of the experiment stations is righting itself on this subject. The band wagon of dualism on the cow question has been driven rapidly through all the stations in recent years, and in nearly all of them teachers of animal husbandry are jumping on. These men are recognizing what many shut their eyes to before, viz.: (1) That dairy form is only a general, not an absolutely infallible, guide in determining dairy capacity. (2) That inheritance in milk-giving is a powerful factor in milk elaboration, notwithstanding the absence of the highest dairy form; and (3) That food also exercises a powerful influence in determining what the milk production of a cow will be, despite her lack of high dairy form. Men have bowed down and worshipped at the shrine of dairy form, when they should have bowed before the trinity of dairy form, dairy inheritance and dairy food products.

A Sad Affair.

Two Alberta ranchers recently lost their lives under peculiarly sad circumstances. They had been to visit friends and left for home considerably under the influence of liquor. They lost their bearings and the rig was upset, the horses bolting. One of them was a sufferer from heart disease and the other would not leave him. Before next morning the former died and his companion was found in a very bad state, his hands and feet both being frozen. After a few days, the latter partly through pain, partly as the result of the drink he had taken, became crazed, and then died. One more example of the terrible danger of going out in winter under the influence of drink.

An enterprising local tradesman has caused a sensation by creating a corner in Queen's pigs. Her Majesty's fat pigs are generally sold to buyers from all parts of the United Kingdom from the Flenish Farm, Windsor, but this year the tradesman in question bought the whole of the Queen's fat prize pigs, numbering nearly 100.

A New Yorker named Hughes has been playing a practical joke on the judges of the recent great horse show there. Under an assumed name he entered a horse in the saddle class, and at the trials his daughter rode the animal round the ring. The horse and another were finally selected as the most worthy in the class, but in the final trial the other animal was awarded the blue ribbon. When Mr. Hughes learned his horse had just missed carrying off the prize, he soberly announced that his entry was a cast-off tramcar horse, which he had bought for eleven dollars. The judges are now busy explaining how they were fooled. Two years ago the same joker entered a stray tom cat in the Oriental female class of the cat show, and a special prize was awarded him by the judges.

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**NINE BULL CALVES
SEVERAL FINE HEIFERS
50 to 60 B. P. ROCKS**
(strong, well-marked cockerels)
My herd consists of 40 animals, headed by Lord Stanley 25th. Correspondence solicited.
WALTER JAMES - Rosser, Man.

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BULLS FOR SALE.

CORNELIUS TEAKE, first prize yearling at Winnipeg and Brandon; **STANLEY TEAKE**, first prize calf under six months at Winnipeg; two choice bulls, good enough to head any herd. **TEMPEST 3rd's CLOTHILDE**, our 4-year-old stock bull, sweepstakes at Winnipeg and Brandon.

These are the kind to buy. Write for particulars as to breeding, etc.

Jas. GLENNIE & SON, Longburn, Man.

Thorndale Stock Farm

24 SHORTHORN BULLS
30 " FEMALES

For sale. They are a good strong lot. Write to
JOHN S. ROBSON,
Manitou, Man.



A lot of nice, lengthy YOUNG BERKSHIRES,

Both sex, pairs and trios, no kin.
Prices to suit the crops.

Barred Plymouth Rock Cockerels
(Beautiful.)

M. B. Turkeys from my prize winners.

A FEW SPLENDID TOULOUSE GEES.

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LARGE IMP'D YORKSHIRES.
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Young stock
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J. E. SMITH

J. E. Smith offers for sale
45 Shorthorn Bulls, all
ages. A number sired by
Lord Stanley II (22280). Some
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this year's crop of Golden
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sold. **40 Shorthorn Heifers**,
from 6 months to 2
years old. **60 Shorthorn
Cows**, all ages. A few young
Clydesdale stallions, mares
and fillies of all ages for sale.

Everything for sale except my stock bulls,
Lord Stanley II and Golden Measure (imp.) and
the Clydesdale stallion Prince Charlie (imp.).
Come and see the stock.

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**BREEDER OF
Clydesdale Horses
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I have a number of promising young Stallions
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My Shorthorn herd is headed by "Best Yet,"
bred by Hon. John Dryden, of Brooklyn, Ont.
A number of young stock of both sexes, all re-
gistered, are for sale, and can be recommended
as first-class animals.

Correspondence solicited. Prices right.

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For sale at all times. Apply to
H. R. KEYES, - **Keyes, Man.**

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EIGHT SHORTHORN BULLS.

Sired by Aberdeen 2nd, from 8 months to 18
months old, for sale. My stock bull Aberdeen is
also for sale, as I have kept him as long as is
prudent, and any one getting him will make no
mistake as his stock will prove.

Write for particulars.

Wm. CHALMERS, Hayfield, Man.

Lakeside Stock Farm.

Large English
BERKSHIRE SWINE
and
SHORTHORN CATTLE.

Stock of all ages for sale. Orders booked for
spring litters from prize winners. Satisfaction
guaranteed. Correspondence solicited.
JAMES M. EWENS, Minnedoos P.O., Man.

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Shorthorns FOR SALE.



1 Roan Bull, 20 mos. old;
1 dark red bull calf, 9 mos.
old; 2 young cows; and 3
young heifers.
All registered in the D.H.B.
Will sell cheap. First come,
first served.
McGill Bros., Carroll, Man.

GOLD MEDAL HOME BRED SHORTHORN HERD.



Young Bulls and Heifers for sale, sired
by Nobleman (imported), Stanley 6th, and
Topsman, champion bull at Winnipeg, Toronto
London and Ottawa in 1899.

This herd also won the Open Herd Prize
against all comers and first for bull and two of
his get. This is the Herd to buy from.

Berkshire and Yorkshire.

J. G. BARRON, Carberry, Man.



**FOR SALE—50 HEAD OF
YOUNG SHORTHORN CATTLE**

(25 Bulls and 25 Heifers)
From 1 to 3 years' old; Bulls 12 to 15 months'
old, all sired by Sittytton Stamp (imp.). All cattle
sold will be delivered freight free as far west as
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**JOS. LAWRENCE & SONS, Clearwater,
Man.**

Wm. G. STYLES, Rosser, Man.

Breeder of
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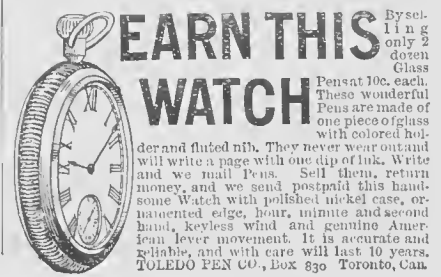
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Calves of great
quality and breed-
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These wonderful
Pens are made of
one piece of glass
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der and fluted rib. They never wear out and
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hands, keyless wind and genuine Amer-
ican lever movement. It is accurate and
reliable, and with care will last 10 years.
TOLEDO PEN CO., Box 830, Toronto, Can.

Feeding Work Horses.

In a recent bulletin, Professor J. H. Shepperd, of North Dakota Agricultural College, gives his experience in the feeding of work horses with different classes of feed. One test was for Brome grass against timothy hay, oats being fed with both. The Brome was evidently more palatable, but little difference in the weight or working power of the horses could be noted. The greater palatability of Brome is universally admitted by all feeders.

Good oat straw was tried against prairie hay, oats varied by a mixture of equal parts of bran and shorts being used along with them. This trial was made on a sufficiently large scale to be fully reliable and the final summation showed that with oat straw as roughage, it took 25 per cent. more grain to keep horses up to their weight and working power than when they were fed prairie hay. They wasted a good deal of the straw and ate less of it. Some ate the straw well, others did not like it, and it was found impossible to prevent loss of weight doing heavy work on straw, while on hay the weight was satisfactorily kept up.

Barley was fed to three horses and two mules for nine months, along with timothy hay. The mules kept up a standing protest against the barley all the time, and when put to harder work would not eat enough barley to keep them up. Whenever given oats they took them with great relish. The barley was readily eaten by the horses, but they stood less hard work on it than on oats. But horses inclined to be "dainty" feeders always prefer oats to barley. "Oats," says the bulletin, "always give more spirit and mettle than can be obtained from any other grain feed. It has the further advantage of having more husk in proportion to the berry, and therefore presents less liability to overfeeding than barley."

Oats and corn were tried on southern bred mules, which took readily to the corn, and did better on a mixture of oats and corn than on all oats. Taking corn at 56 cents a bushel and oats at 25 cents, the value of the two feeds thus blended would be nearly equal.

Some years ago, with wheat alone as a grain feed, this station demonstrated that No. 1 hard led to derangements in digestion, part of the grain at the same time being passed undigested. Two parts of the same wheat ground and mixed with one part of bran made as good feed as oats. Frozen wheat, if not also mouldy, is rather better for stock than the best, as it contains a greater proportion of muscle-forming matter. Repeated trials show that bran and shorts in equal proportions and well-mixed kept up the horses as well as oats did, though the oats were perhaps better liked.

In connection with the same question it is interesting to note that at a recent meeting in Glasgow, the veterinarian in charge of the tramway horses of that city, which number over 4,000, read a long and carefully prepared paper, in which he showed that an even mixture



[Life Photograph]

Lord Ingleside 6th (93914).

Winner, at 16 months old, of first prize as yearling Hereford bull, and sweepstakes all ages at Winnipeg and Brandon fairs, 1900. Owned by J. A. Chapman, Beresford, Man.

of oats and corn was long thought more economical and quite as useful as all oats. But for over four years no oats at all have been fed. The daily grain

allowance for a horse in regular work is now 10 lbs. of corn and 5 lbs. of peas. All these horses are regularly fed six times a day and watered before feeding, and the amount of sickness is a mere trifle.

In the discussion that followed the reading of this paper some owners of draft horses agreed with the blend of oats and corn. Others did not. One old stager said that horses fed corn always looked "down in the mouth" when coming off a day's work, while those fed oats showed more "mettle." Whole oats are better digested than when fed crushed. The old Scotch practice of giving boiled barley as an evening feed was generally condemned as leading to digestive troubles. "It was a fine thing for the doctors." Overwork and overfeeding, to keep it up, were also denounced. It is bad to give all horses the same amount of salt in their feed. Some like it, some will not use it if they can help it. It is best to put a piece of rock salt in the manger.

In the same connection it is well to note that the two great cab companies of Paris have been trying corn since 1870, and since then one of these companies has entirely left off the use of oats. The other company believes it makes a great saving by using both oats and corn. The race horse men, however are as strong believers in oats as ever they were. Curiously, one objection made to the oats is their hull, the very thing that Prof. Shepperd thinks is one point in their superiority.

The first Canadian auction sale of pure bred stock will be held at Ottawa in the Central Canada exhibition buildings on Wednesday, March 6th. A large meeting of representative stock



[Life Photograph]

Hereford Bull, Strathcona (973).

Second prize two-year-old at Winnipeg Industrial. The property of F. B. Miller & Sons, Solsgirth, Man.

men, with F. W. Hodson in the chair, was held the other day at Ottawa to complete the preliminary arrangements. Many front rank breeders have already promised to forward stock.

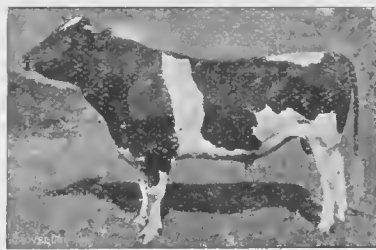
As was expected by those who saw the cars of mongrel yearlings shipped to the western ranches in recent years, the outcome has been very unsatisfactory. Nearly all of them have turned out rather poor butchers' cattle, of coarse and inferior quality, that will hardly pay expenses. Pure bred beef sires or nothing will be the rule in future purchases from the east.

The cow which twice was declared champion at the London dairy show recently died of milk fever. This cow, whose name was Nancy, was a cross-breed, her sire being an Island-bred Guernsey bull and her dam a deep-milking pure bred Shorthorn. She was calved Nov. 6, 1891, and won her championships at the London dairy show in 1898 and 1899. Had she lived to be shown again it is probable that she would have won out for the third time, as the day before she took sick she gave 63 pounds of milk and in three successive periods of lactation extending to ten and one-half months each gave 1,500 gallons.

R. T. Saunderson, Minnedosa, Dec. 27, 1900: "I am an old subscriber to The Farmer, and consider it an up-to-date agricultural paper."

Smithfield Fat Stock Show.

This, the last of the great British fat shows and the 102nd held by the society, came off on Dec. 10th to 15th. The entries were 574, or 90 fewer than last year. The leading prize-winner was Queen Victoria. All her exhibits are bred by herself, and the awards are strictly on the merits. Her farm manager, Mr. Tait, is an acknowledged



[Life Photograph.]

Holstein Bull,
Hayfield Prince Clothilde.

The property of Wm. Ranson, Carberry, Man. Second prize aged bull at Winnipeg and first at Brandon in 1900.

judge of what he handles. He never fails to bring out a lot of good things.

In Devons, the first breed on the list, the first was John Wortley, Norwich. His steer, nearly 3 years old, weighed 1,606 lbs. The Queen had a 1st and 2nd in this breed.

In Shorthorns, the Queen had two 1st, the championship of the breed and 1st for best animal bred by exhibitor. Her champion, the 33-months-old Cicely, weighed 1,806 lbs., and was champion over all ages and breeds at Birmingham the week before. Her steer, Robin Hood, was also 1st at Birmingham. The Earl of Rosebery had 2nd to Robin Hood with Royal Standard, 1st at Edinburgh; weight at 23 months, 1,588 lbs. In the older steer class, Lord Rosebery had 1st with Talisman, champion of the breed at Edinburgh. Cicely, the Smithfield champion, was also 1st in summer at the Royal and at Edinburgh, and was reserve here to the champion of the show.

Polled Angus had no specially fine representatives. The championship of the breed went to Geo. Bruce for Cock o' the North, also champion at Edinburgh. This steer at barely 23 months weighed 1,547 lbs. Lord Rosebery had 1st in the older class with Black Diamond, weighing 1,914 lbs. at 31 months. The heaviest steer in this class weighed at 33 months 1,964 lbs.

In Galloways, Sir John Swinburne had the championship with a 22-months-old steer, weight 1,374 lbs., also 1st at Edinburgh. Lord Antrim's 1st in the older class was also 1st at Edinburgh; weight, at 34 months, 1,374 lbs.

In West Highlanders, Lieut.-Colonel H. Drummond had championship with a steer 41 months old, weight 1,908 lbs. He was 1st at Edinburgh.

Cross-breed cattle are always a grand lot, the champion being an Angus-Shorthorn heifer, Ladysmith, also champion in the same class at Norwich. She was also reserve as best beast in the show, going in ahead of the Queen's Cicely, which most people expected to take the very highest place. Mr. Learner, owner of this heifer, has now been for five years next to the championship of the show, but never hit it. Second place went to Captain Townsend's Cock of the North. Most of this class were raised in the north of Scotland.

The championship of the younger animals went to John Ross, Meikle Tarrel, Ross-shire, for a heifer 23 months old, champion of all classes and breeds at Inverness, reserve champion at Edinburgh, and 1st in her class here. She is an Angus-Shorthorn cross. For best steer over 2 years, Mr. Wortley, the winner of the championship in the Devon class, had the championship with his Hereford steer, Lord Roberts, afterwards made champion of the show. This was an extra fat animal and very nearly

beaten by Ladysmith, the female champion.

In the carcass competition, J. D. Fletcher, of Rosehaugh, Ross-shire, was champion with an Angus-Hereford cross steer, Sir John Swinburne's Short-horn-Galloway steer 2nd. In this class the Queen again had two 1sts. All the winners in this class were Scotch crosses, the Angus, as at Chicago, being most prominent.

Buyers were not so wild over prize-winners at Smithfield as last month at Chicago, and the best figures were made by animals not over-fattened, the crosses being most in demand. The same thing happened last year when over-fed cattle made a very slow sale. Butchers are gradually learning that the beast fed to make good beef is the one to put their money on.

It may be interesting to contrast the weights given above with those of the Chicago champion, Advance. At 23 months he was 1,430 lbs. The Rosebery Shorthorn, Royal Standard, at the same age, was 1,588 lbs., and Bruce's Angus, a few days younger, was 1,547 lbs., thus leading the champion of America by 117 and 158 lbs.

The Army of Health.

The Army in the Philippines Insignificant Compared With This One.

If all the people in the United States, Canada and Great Britain who make daily use of Stuart's Dyspepsia Tablets could be assembled together it would make an army that would outnumber our army of one hundred thousand by at least five to one.

Men and women, who are broken down in health, are only a part of the thousands who use this popular preparation; the greater number are people who are in fair health but who know that the way to keep well is to keep the digestion perfect, and use Stuart's Dyspepsia Tablets as regularly as meal time comes to insure good digestion and proper assimilation of food.

Prevention is always better than cure, and disease can find no foothold if the digestion is kept in good working order by the daily use of Stuart's Dyspepsia Tablets.

Mr. Thomas Seale, Mayfield, California, says: "Have used and recommended Stuart's Tablets because there is nothing like them to keep the stomach right."

Miss Lelia Dively, 4627 Plummer St., Pittsburg, Pa., writes: "I wish everyone to know how grateful I am for Stuart's Dyspepsia Tablets. I suffered for a long time and did not know what ailed me. I lost flesh right along until one day I noticed an advertisement of these tablets and immediately bought a 50-cent box at the drug store. I am only on the second box and am gaining in flesh and color. I have at last found something that has reached my ailment."

From Mrs. Del. Eldred Sun, Prairie, Wis.: "I was taken dizzy very suddenly during the hot weather of the past summer. After ten days of constant dizziness I went to our local physician, who said my liver was torpid and I had overheated my blood; he doctored me for two weeks without much improvement. I finally thought of Stuart's Dyspepsia Tablets (which I had used long before for various bad feelings) and the first three tablets helped me. They are easily the best all-round family medicine I ever used."

The army of people who take Stuart's Tablets are mostly people in fairly good health, and who keep well by taking them regularly after meals. They contain no opiates, cocaine or any cathartic or injurious drugs, simply the natural peptones and digestives which every weak stomach lacks.

Stuart's Dyspepsia Tablets are sold by druggists everywhere in the United States, Canada and Great Britain.

When writing advertisers, quote The Farmer.

AMONG THE BREEDERS.

J. J. Molr, Glendinning, has sold the yearling Shorthorn bull, Glendinning Chief, to Ralph Vipond, Killarney.

John Logan, Murchison, Man., writes that he has sold a two-year-old Shorthorn heifer to George Little, Neepawa.

J. A. McGill, Neepawa, in sending us a change of advt., writes: "I have a very nice bunch of young sows from 6 to 9 months old that I am breeding, to farrow from 1st of April to last of May."

John McTurk, a well-known old settler in the Elkhorn district and familiar in the show ring as a horse and cattle judge, died lately at the age of 70. Mr. McTurk gave up farming two years ago and has since lived in the town of Elkhorn.

Fred W. Green, Moose Jaw, Assa., writes: "My stock are doing well, and we have only one young bull left for sale. We have sold a very fine young bull recently to Nelson T. Alcock, Pasqua, Assa. We have also made several other sales. Young bulls were sold, one each to S. K. Rathwell, Dr. Turnbull, Wm. Lewis and George McCartney."

King Bros., Wawanesa, Man., write:—"Since our last letter we have sold a large number of pigs. The following are some of our recent sales:—One boar each to the following: Jas. Stancombe, Cartwright; W. T. Britton, Jas. Downey, Geo. Stevens, Wawanesa; sow to W. S. Wilson, Holland. We have on hand at present some very fine young sows fit to breed, also a few boars fit for service. We have also made some good sales of White Rocks and are completely sold out, except a few cockerels. We are importing some birds from the foremost breeder in the States, and intend showing at Brandon this year. Our breeders' card in The Farmer has paid us well."

The Farmer is in receipt of the following note in connection with the two very fine Clydesdale mares, both rising 4 years old, which Porter Bros., Breckenbury, Assa., have purchased from Jno. A. Turner, Millarville, Alta.:—"Balgrogan Princess [2449], is an exceptionally fine animal, with fine bone and splendid action. This mare has an unbeaten record in the show ring, having secured 1st ticket wherever shown. Independence Girl [2450], although not so successful in the show ring, has claimed honors and recognition, and is considered by many competent judges very little behind the other mare in get-up. It is the intention of Messrs. Porter Bros. to raise pedigreed stock, and they are to be congratulated in securing such fine specimens of Clydesdale blood with which to lay the foundation."

John A. Turner, Millarville Alta., gave The Farmer a call the other day on his way to Ontario. He reports a good season's business in horses. Of late he has made sales of Sonnie Lad, two-year-old Clyde stallion, to D. H. Andrews, manager of the Canadian Land & Ranch Co., Crane Lake, Assa.; to Messrs. A. & G. Mutch, Lumsden, Assa., he has sold the two young Clyde stallions, Balgrogan's Heir and Victoria's Triumph, together with 25 mares, fillies and geldings, all Clydes excepting a handsome pair of Hackneys; to Wm. Porter, Breckenbury, Assa., have gone two registered Clyde fillies. This last pair were prize-winners at the Calgary fair this fall, and are both descended from Balgrogan Hero. This is certainly a fine list of sales, and speaks well for the quality of Mr. Turner's stock. His intention is to visit some of the leading Ontario breeders before returning, with a view of making some new selections. Speaking of the prospects on the range this winter, Mr. Turner expressed satisfaction. Up to the present, the stock has kept in good condition, and there has been no need of feeding.

Joseph Lawrence & Sons, Clearwater, Man., write: "We beg to announce to our customers in Manitoba and the N. W. T. that we will not have any female Shorthorns to sell for at least one year, as we are next summer building one of the largest barns in Canada, with the object of increasing the number of our herd to 200 head of breeding females. So all we have to sell at present are about 15 bulls from 12 to 15 months old, sired by Sittytton Stamp (imp.). See advt. All our cattle have gone into winter quarters in good shape, and up to date have only had straw for feed, but we have over 300 tons of hay for balance of winter. We have again at the head of our herd George Bruce, which took 1st prize at Winuipig and Brandon last summer, and the 18-months-old Jubilee King is second in command. This bull is a full brother to Jubilee Queen, which took sweepstakes at Winnipig in 1899. We consider Jubilee King the best 18-months-old bull in Canada. In conclusion I must thank my customers in Manitoba, N. W. T., and the States, who have purchased nearly 400 head of cattle from us during the last ten years, and we can truly say that not from one did we ever get the slightest complaint whatever. In fact, every animal gave satisfaction as far as we know."

A farmer living near Rounthwaite accidentally made a mistake in mixing some medicine for his horses. As a result three of the animals have died. It seems the beasts were suffering from worms, and he prepared a dose of turpentine and oil, but in mixing them he did not put in enough oil.

Horse Owners Should Use
GOMBAULT'S

Caustic Balsam

The Great French Veterinary Remedy.
A SAFE, SPEEDY AND
POSITIVE CURE.



Prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud.

SUPERSEDES ALL CAUTERY OR FIRING
Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blomishes from Horses or Cattle.

As a **HUMAN REMEDY** for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable. That one tablespoonful of **WE GUARANTEE CAUSTIC BALSAM** will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS CO., TORONTO, ONT.

Cattle for Export.

I have used Herbageum for several years in fattening cattle for export and find it a great advantage not only in laying on of flesh and keeping the animals always hearty and ready for their feed, but the meat is much superior. It is of a better color, is firm and of fine flavor, and the difference in quality is very noticeable. Parties ask me how I feed to obtain such fine meat, and I inform them that it is the result of Herbageum. I do not feed roots, as I can get better results with dry feed and Herbageum. I feed a mixed chop of peas, corn, bran and shorts with straw, and my cattle are doing well. Last year I fed the same chop mixture with hay, but this year I am not feeding hay. I buy in cattle weighing from 950 lbs. to 1,200 lbs., and have them in shipping condition in from 100 to 120 days. Last year the gain per head per day ranged from two and a quarter lbs. to two and six-tenths lbs. In taking weights I always weigh the animals before watering them.

In re-stocking my stable in January there are always some of the animals badly troubled with lice, but one month's use of Herbageum knocks them higher than a kite; it's grand for cleaning out lice, and it keeps the skin soft, silky and pliable.

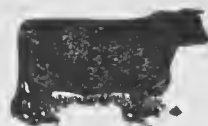
At present I have a very fine calf that has been fed Herbageum right along. It is just eleven months and four days old and has never had whole milk, and generally only the same feed as the other animals. It is from a Jersey grade heifer that was under two years old, and a Durham sire, and this morning the calf before watering weighed 675 lbs.

D. HANLEY,
Cainsville, Ont.

HERBAGEUM is manufactured by the Beaver Mfg. Co., Galt, Ont., and can be purchased in nearly every town and village in Canada.

An evidence of the value of the tuberculin test came under the observation of one of our staff a few days ago. A government test had been made some time ago of a Boissevain farmer's herd, with the result that a very fine cow, which evidenced no external symptoms of disease, showed a reaction. The owner was not satisfied, and had a private test made later, with like results. When the cow was killed, her lungs were found to be almost rotten, and a single tubercule shown us by W. Little, V. S., was half the size of an egg, and filled with virile-looking pus.

ABERDEEN STOCK FARM



130 Aberdeen Angus Cattle.
40 Shorthorn Cattle (OF GREAT VARIETY)
My Shorthorns were all brought in from Ontario two years ago.

Aged and Young Stock of all kinds for sale.

A. B. FLEMING, BRANDON, MAN.

FARMERS' LIVE STOCK EAR LABELS



A thing that every farmer should use. Also a very handy punch to insert them. Many have answered ad. and sent for circular and price list and ordered, and some have sent for price list and have not ordered. Please tell us why. Send for circular and price list. R. W. JAMES KING ST., - BOWMANVILLE, ONT.

SASKATOON

Shorthorn Stock Farm.

(Established 14 years ago.)

CHOICE YOUNG BULLS and
HEIFERS FOR SALE.

3 Bulls rising two years old.
4 Bull Calves.
Heifers and Cows.

The bulls are roans and reds and a smooth fleshed, fine lot.

The young animals are the get of the present head of the herd, Indian Warrior's Hero, 20,816, a son of the noted Indian Warrior, the champion of the World's Fair, Chicago.

The cows and heifers that have been bred are supposed to be in calf to him.

For particulars apply to

I. J. Caswell, West Saskatoon, Sask.

4 Holstein Show Bulls

Best Milking Strain.

Two seven months old, one twelve months old, one two years. Being short of feed, will sell under value. Satisfaction Guaranteed.



SHROPSHIRE

Improved Large Yorkshires and
Jersey Red Swine

JOHN OUGHTON, Middlechurch, Man.

Herefords Herd headed by "Sir Ingle-side 2nd," descended from the famous "Corrector."
Ayrshires include many winners at leading fairs.

ED. T. PETAR, Souris, Man.

HOLSTEINS AND YORKSHIRES

Some good young boars, fit for service. Prize winners. Prices reasonable for quality.

A. B. POTTER, - Montgomery, Assa.

PURVES THOMSON, PILOT MOUND, MAN.

Choice bred Shorthorns and registered Clydesdales. One imported Stallion and some very choice mares and fillies for sale. Two imported Bull calves and also one Bull calf from Caithness, and a few good show heifers and young cows and heifer calves for sale from Caithness.

BISSELL'S

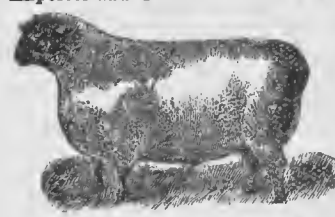
Steel Rollers

Built with solid Steel Heads in the Drums, Truss Rods under the Frame, Heavy 2 inch Axle, Roller Bearings, Low Down Draught, 8, 9 and 12 ft. lengths. A perfect beauty. Write for prices to



T. E. BISSELL,
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ROKEY STOCK FARM, BRANDON, MAN.
J. A. S. Macmillan,
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Clydesdales, Shire and Hackney Stallions and Mares, Shorthorn Cattle and Shropshire Sheep.

Correspondence solicited. Inspection invited. Prices right. Terms easy. Full particulars on application. Apply P. O. Box 423, Brandon, Man.

MAPLE GROVE FARM

D. E. CORBETT, breeder of
SHROPSHIRE SHEEP.

Stock always for sale. Have a bunch of nice ram and ewe lambs for sale. My sheep are from the well-known breeders John Campbell and Hammer & Sons, Ontario. Address—Swan Lake P. O., Man.

TURTLE MOUNTAIN STUD OF CLYDESDALES.

Imp. and Home-bred Stallions for Sale.

Two-three and four-year-old Colts, sired by such noted stallions as

PRINCE OF WALES (673) DARNLEY (222)
BELTED KNIGHT (1395) STANLEY PRINCE (6315)
PRINCE PATRICK (8933) MACCREGOR (1487)

These horses are of the finest quality, good action, good large flat bone, the best hoofs. Some of them prize-winners in the old country, and all of them large. For further particulars apply to

J. C. McLEOD, Manager, Ninga, Man.
Another importation to arrive the last of March

POLAND CHINAS OF UP-TO-DATE BREEDING



Have some fine early Spring Boars and Gilts, sired by Manitoba Chief, (1221) and Bob Place, (1444) for sale, that in quality and price will satisfy the most discriminating buyers. Some fall Gilts of equal merit. Recent additions of newly imported blood ranks my herd amongst the foremost in the country. Also two extra good 2-year-old Shropshire Rams and Ram Lambs for sale cheap.

Write your wants.

W. L. TRANN, CRYSTAL CITY, MAN.

PLAINVIEW STOCK FARM



Is always able and ready to supply your wants in

SHORTHORN BULLS and HEIFERS, COTSWOLD and LEICESTER RAMS and EWES, BERKSHIRE BOARS

And Sows in farrow, Toulouse Geese and B. P. Rocks at bad crop prices. Write or call and see what I will do for the next 30 days to make room for young stock coming. Lyndhurst 4th, that great show Bull and Spicely Robin at the head of the Shorthorns, Fitzsimons B. leading the Cotswolds to the front, and Gallant Boy, Tippecanoe 2nd and Can't Be Beat heading the herd of Berkshires, has produced the best I have ever had and can do it again.

Come and see my stock, you will be welcome. No business, no harm. Will be met at station and returned there.

F. W. BROWN, Proprietor,
PORTAGE LA PRAIRIE, MAN.

Shorthorns Cotswolds

are what we are breeding, and if you want anything in our line you may find it to your advantage to try us before buying elsewhere. D. HYSOP & SON
2 1/2 miles from station. Box 492, Killarney, Man.



As it is desired to make this column as interesting and valuable as possible to subscribers, advice is given in it free in answer to questions on veterinary matters. Enquiries must in all cases be accompanied by the name and address of the subscriber, but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and symptoms clearly but briefly set forth.

Knuckled Over.

G. H. D., Portage la Prairie, Man.: "I have a five-year-old mare which is knuckled over on the right hind foot. Have blistered it and used liniment to no effect. What would you advise me to do?"

Answer.—A plaster of Paris bandage, carefully applied, would be the best means of curing your mare's leg. This requires skill and experience for its proper application, without which it will do no good. You should consult one of the veterinarians in your town, any of whom are well qualified to treat your mare.

Tumor in Throat.

Rancher, Graburn, Assa.: "I have a heifer that has a large, hard lump in her throat at root of tongue. What can I do for it?"

Answer.—A good sharp blister, well rubbed in over the swelling, will most likely cause it either to grow smaller or to suppurate. In the latter case, as soon as you can be reasonably sure by the feel that there is matter present, lance the swelling with a sharp knife, squeeze out the matter, and pack the cavity with absorbent cotton sprinkled with finely powdered corrosive sublimate. This will destroy the diseased lining of the cavity, which will then heal and close up.

How to Feed Straw.

W. H. Lawrence, Glenlyon, Man.: "Would you kindly answer the following question through your veterinary column? Which do you consider the best way to winter horses, on straw cut with a cutting box and mixed with chop, or fed straight? Would the binder twine in the straw be injurious to horses, if cut up and fed?"

Answer.—The most economical way to feed straw to horses, or, in fact, to any kind of stock, is to cut it into inch lengths with a straw-cutter and sprinkle the chop over it. The binder twine would not be in sufficient quantities to cause any injury. Straw, especially that of wheat, is rather constipating to horses, and their bowels will require to be regulated by giving some laxative food to counteract this effect of the straw. This may be either roots, bran, or ground oil-cake. If the horses get regular exercise, this constipating effect of straw is not so apparent as when they are constantly in the stable.

Swelled Leg.

E. H. B., Cypress River, Man.: "I have a mare that got cut in the hock last August in the wire fence. The cut was not very deep, but her leg has been swelled to nearly twice the ordinary size. She will be four years old in the spring, and has never raised any colts. Please advise how to treat."

Answer.—Get the druggist to make up the following prescription for you: Chloride of ammonia, half a pound; vinegar, half a pint; alcohol, half a pint; soft water, one gallon. This should be kept in an earthenware jar. Also procure a couple of Derby bandages (most of the harness shops have them). Now give your mare some work or exercise every day, and after returning to the stable, and cleaning her leg if necessary, apply the bandage previously soaked in the lotion. Begin to apply the bandage at the fetlock, with a turn or two around the pastern, and then up the leg to the hock, letting each turn of the bandage overlap the previous one by half its width. The bandage should be put on tight, but evenly, without creases. Continue treatment daily.

Hydrocephalus, or Water on the Brain.

Robt. Hall, Dundee, Man.: "Last spring when my sow farrowed, nearly half of her litter were deformed, with red, soft-looking lumps on their heads, just a little lower than between their ears. If the spot was large, the pig generally died, or if the lump broke, they died, while the ones with the smaller lumps seemed to outgrow it, and thrive all right. Please tell me through your column what is the cause and cure."

Answer.—This is a disease of the coverings of the brain inducing a dropsical condition commonly known as "water on the brain." The causes of this disease are not understood, as it occurs in all species of animal, and under various circumstances. Any influences tending to weaken the constitution, such as in-and-in breeding, would be predisposing causes. There is no cure for this condition. If there is only a small opening in the skull through which the distended brain covering protrudes, there is a good chance of recovery. The opening grows smaller and smaller until it closes and the disease disappears. But in ordinary cases, the skin ulcerates and the swelling "bursts" and death results.

Cramp—Tonics for Horses.

Farmer, Rounthwaite, Man.: "Will you kindly answer the following questions through the next issue of your valuable paper? 1. Mare, coming seven years, takes a kind of cramp in hind leg. Sometimes when I go into the stable in the morning and tell her to get over, she can hardly move her hind part. One leg appears to be stiff, but only for a while. She swells some in the legs at present. Was first seen taking these cramps after she had been running out in the winter when three years old. 2. Do you recommend tonics for horses? If so, what kind? 3. Is raw linseed oil good for horses that have run down, or when they are eating straw? What do you think of boiled grain for horses, or is linseed oil and raw grain as good as boiled grain?"

Answer.—1. The symptoms are somewhat obscure, and the diagnosis is therefore doubtful, but it appears as if your mare suffers from an occasional partial luxation of the patella. To explain this in everyday language:—In front of the stifle joint there is a small bone, the patella, corresponding to the knee-cap of man. This little bone is freely movable in every direction within the limits of the tendons and ligaments holding it in place and when the leg is in motion, slides up and down in front of the stifle. The patella may become displaced, or dislocated, in two directions, viz., outwards, or upwards. The outward dislocation occurs when some violent movement has ruptured or overstretched the internal lateral ligament, which prevents this luxation. Two symptoms of this condition are a sudden stiffening of the limb in the extended position, and a complete inability to flex or bend the joints. The other form of luxation (taking place in an upward direction) may occur without any violence or injury to tendons or ligaments, and is the result of the patella being drawn upwards a little too far and getting "stuck" at a point where the muscles are unable to move it, like an engine "stuck in the centre." The limb then remains stiff and the animal is unable to lift it from the ground. Some movement of the body may accidentally set the bone free again and motion is then unimpeded and free. Both forms of luxation are very apt to recur, and often become chronic. The "cramps" which occur to your mare "for a while" may be nothing more than a frequent displacement of the patella, which slips out of position and in again without difficulty or apparent cause. The swelling in her legs indicates a poor circulation, caused either by lack of condition or want of exercise.

2. Tonics are useful for horses under some conditions, but can never take the place of good food and care. Tonics do not impart any strength whatever. That must be derived from the food consumed. But tonics will improve the appetite and assist digestion, and thus enable a horse to absorb more nutriment in a given time than he will under ordinary circumstances, and thus he improves in condition. Vegetable tonics are to be preferred for horses, and of these gentian root is the best, but a judicious combination of tonics with aromatics, such as ginger, is usually better than giving any one alone.

3. Raw linseed oil may be given as a purge for a horse, the dose being an imperial pint or two, according to the size of the animal. It may also be given in small doses in the feed every day to aid in fattening. In this case the dose must be small or the oil is not digested and absorbed, but only serves to lubricate the bowels, a useful function, however, when feeding straw.

Paraplegia.

W. H. Scott, Whitewater, Man.: "Have a horse colt, two years old in the spring. Brought him in off pasture about six weeks ago. After standing in the stable a few days, he seemed paralyzed in hind quarters. He was unable to get up for about a week; then I blistered with mustard and turpentine across the loins, which seemed to help him some, and he was able to get up for a while. But soon he was only able to get up about every other day. Please let me know the name of the disease and its treatment. I feed him rye hay and a little whole oats and bran mash. I gave him one dose of saltpetre and one of sweet nitre."

Answer.—Paralysis affecting the hind limbs is the result of injury to the spinal cord, or of perverted nerve energy, constituting "reflex" paraplegia. This latter form of paralysis is seen when animals have been fed on bulky innutritious feed for some time, and the digestive function is improperly performed. Constipation is usually present in such cases. As there seems to be no history of any possible injury to the spinal cord, it is likely that the condition is produced by reflex nervous action from the digestive organs and treatment should be adopted to restore these organs to a state of health. Begin by administering a dose of raw linseed oil large enough to purge the colt, then put him on a diet of good sound hay, bran mash and some oats, two to six quarts, according to his size, etc. Feed and water him at regular times and give him twice daily in his feed a tablespoonful of the following powder:—Powdered nuxvomica, two ounces, sulphate of soda, one pound, common salt, one pound; bicarbonate of soda, two ounces. To be finely powdered and well mixed.

Pawing in Stable—Lice.

Subscriber, Austin, Man.: "I. Can you give me, through your paper, a cure for a colt's pawing in and out of the stable. I have a colt, and no matter what food is before him, he is all the time pawing. How can I break him from this habit, which is so annoying. 2. Also please give recipe for lice on cattle and horses. My cattle are troubled every winter."

Answer.—1. Take a piece of trace chain about a foot long and fasten it by one end to a strap which is buckled round the pastern of the foot the colt generally paws with.

Dr. Hess' Stock Food

WILL MAKE MONEY FOR YOU.

It is a scientific compound of the essential elements that are lacking in the various foods upon which horses, cattle, hogs and sheep generally subsist.



It produces flesh by compelling the system to do its best. It permits no food to pass off undigested. It wards off diseases. It is called a food for the want of a better name. It is not exactly a medicine, nor a substitute for hay and grain and other foods. It is both nutritious and curative. It is not a stimulant but a tonic. It aids the digestion, and thereby gets the most muscle and fat and milk and wool out of the various foods that the horses and hogs and cows and sheep eat.

Prices are as follows:—

7 lb. Sack	-	-	-	\$ 65
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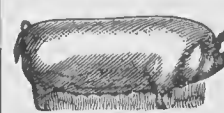
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1 Young Bull sired by Knuckle Duster (imp.) 1 Young Bull, sired by Lord Lossie 2nd. Number of choice heifers. Fine lot of young boars and sows. White P. Rock Cockerels.

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Four Boars of February litters at \$7.00 each, second litters now coming will be sold at \$5.00 each. First come, first served. Two first prize Boars at head of herd. Pairs not akin.

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I am offering for sale

Roadster Stallion
Imp. Clyde Stallion, "Harry's Boy," (5069, Vol. 9.)
Shorthorn Bull, 18 months old.
Two Shorthorn Bull Calves
WM. MAXWELL, MORPANO, MAN

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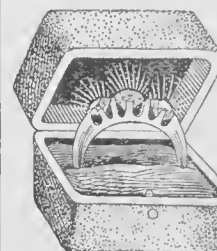
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Number of young Bulls and a few good Cows in calf for sale. Barons Pride (Imp.) first in his class at Winnipeg, 1899, Stock Bull.

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We give this beautiful Gold Finished Ring, set with three magnificent brilliant-cut diamonds for selling only 10 handsome Scarf Pins at 10c. each. Mails this advertisement, with your name and address, and we'll send you the Pins. Sell them, send us the money, and we will mail you this beautiful Ring carefully packed in a handsome velvet lined case. **Empire Novelty Co., Box 1105 Toronto, Can.**



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and save the toll. You have the horses, we have the power and mill. Thousands of the.

PEERLESS MILLS are now in use. They work FAST, FINE, EASY. Make family meal or feed. Agents Wanted Everywhere. Circulars, prices, etc., free.

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The loose end of the chain will strike him on the other leg when he paws, and induce him to stop.

2. Creolin, four ounces; water, one gallon. To be sprayed over the cattle until the coat is wet all through. In winter it is not safe to use this unless the weather is mild and the cattle kept in a warm stable. In cold weather it is better to use fish oil. This is poured along the spine of the "crittur" and allowed to work its way down each side. This is highly recommended by several well known cattle breeders of this province.

To Obtain a Catheter—Rheumatism.

A. W. Payn Le Sueur, Morley, Alta.: "1. Where can I obtain a catheter for a horse? 2. Give best cure for rheumatism in horse's shoulders."

Answer.—1. Any veterinary instrument dealer can supply you. Write to the J. Stevens & Son Co., Wellington St. E., Toronto.

2. Rheumatism is just as difficult to cure in horses as in men and the "best cure" is still to be discovered. Your horse may have rheumatism in the shoulders, but it is perhaps well to point out that navicular disease in the feet produces symptoms that might easily be mistaken by a novice for rheumatism in the shoulders. A good penetrating liniment well rubbed in is the best treatment we can prescribe for rheumatism of this kind.

Enlarged Gland.

Subscriber Douglas, Man.: "I have a pure bred Berkshire sow one and a half years old. She raised a litter of eight pigs last fall, and three weeks ago a lump came on the left side of her neck. It has kept growing since and now it is very large, the swelling reaching from her throat to her ear. It seems hard, though the skin seems loose from it. It does not seem to hurt her to eat at all. I kept her and another sow running out, and they lay in the straw stack, but it seemed too cold for them, so I put them inside, letting them run out nearly every day. The straw was stacked with a blower and it seems too tight for the sows to work into it to make a warm bed. Will you kindly let me know through your valuable paper, what is the trouble and what I had better do for her."

Answer.—This is probably a case of enlarged thyroid gland, not dangerous to life, and, in fact, not interfering to any noticeable extent with the general health. If you wish to remove the swelling, give the sow twice a day twenty grains of potassium iodide. This may be dissolved in a little water and mixed with her feed.

Rickets in Pigs.

J. V. G., Carnduff, Assa.: "Is there any cure for pigs which are crippled up? I suppose it was caused by heavy wheat feeding."

Answer.—This is a disease of the bones caused by want of variety in the food. The young and growing animal requires a large amount of lime and phosphate to build up the material of which bone is composed, and if there is a deficiency of these elements in the food, the bones are soft and frequently give way under the increasing weight of the animal. There is no doubt what is ailing your pigs, and it is likely that the malady has reached a stage where cure is not likely. You should change their ration, giving some roots if possible, and add a tablespoonful of bone meal to each feed.

Leg and Foot Mange.

W. S. B., Brokenhead, Man.: "Heavy Clyde mare has a thick dry scurf in the long hair around fetlock, front and hind (most on hind feet). Had the same last winter, but did not show in the summer. Also has some dry scabs on inside of hind legs near the body. Rubs her hind feet together while in the stable; when outside, loose, rubs her neck and shoulders and bites herself. Feet have a pungent smell. No discharge. Kicks the floor heavily and often."

Answer.—This is caused by a minute parasite like a tiny spider which lives in the skin of the legs, causing much irritation. In the summer time the skin furnished abundance of food for these little parasites in the plentiful secretion of the sebaceous glands, caused by the warm weather, but in winter the parasites have to bite the skin to obtain supplies, hence the itchiness in winter and not in summer. They are not difficult to get rid of if vigorous treatment is adopted. First clip the legs from the feet to the body, and, if scabby, wash them well with soft soap and water. Then apply creolin solution, one part to 20 of water, and rub it in with a brush. Three days later apply the solution again, previously washing the legs if very scabby. Two or three applications should effect a cure. Curry combs and brushes are likely to carry the parasites to other animals and should be disinfected by soaking in the same solution.

A Barren Cow.

Subscriber, Burnside, Man.: "I have a valuable cow which I bought nearly a year ago, which was to have her calf in August, but when I had her home about two weeks I found she was not in calf at all. She comes around about every two weeks and a half. Can I return the cow to the man I got her from, and also is there any chance of getting her in calf?"

E. H. Berry, Cypress River, Man., Jan. 7, 1900:—"I am pleased to tell you that your advice for foal with rupture of navel was all right. Did not do anything to it and now it has disappeared. I consider The Nor'-West Farmer a most valuable book for the farmer."

Answer.—You should have returned the cow as soon as you discovered that she was not in calf. Having kept her nearly a year has prejudiced your claim for damages. As to getting her in calf it is difficult to advise, for you have probably exhausted the usual means, unless you can try a change of bull.

Biting a Hard Puller.

J. F. D., Carberry, Man.: "I have a horse, seven years old, which is very hard to hold. I have tried every kind of bit on him, but it does not make any difference. He gets excited, but does not seem to fret. Will you tell me something to do with him?"

Answer.—Undoubtedly the most effectual bit to control a hard puller is the curb, and, if properly fitted and adjusted, it is not as cruel as some of the twisted and jolted abominations which torture the animal by a pincher-like action on the jaws. Before selecting a bit you should examine the horse's mouth and see if there is any injury of the tongue or bars. Many a horse becomes a hard puller from the punishment he receives from unnecessarily severe bits.

Scratches—Blackleg, Etc.

Rancher, Alta.: "As a subscriber to The Farmer, I would be much obliged if you would give me information on the following: 1. Cure for scratches. 2. Cure for blackleg. 3. Amount of sulphur advisable to feed to cattle and sheep in salt. 4. Treatment for cow that cannot clean after calving."

Answer.—1. Wash the scratches clean with soap and soft warm water, not hot. Dry gently with a towel and then dust the following powder over them: Iodoform, 1 part; oxide of zinc, 1 part; powdered boracic acid, 4 parts. Apply the powder frequently, but avoid washing the part oftener than is necessary to keep clean.

2. There is no cure for blackleg. It may be prevented, however, by injecting the cattle with "Pasteur Vaccine." This is prepared by the Pasteur Vaccine Co., Chicago, and may be obtained from W. J. Mitchell & Co., Winnipeg, with full directions for use. Its effect may be compared to that of vaccination in protecting mankind from small-pox, and when properly used is very effective. See their advt. in this issue.

3. Sulphur is not poisonous and may be given freely when required—a teaspoonful to a sheep, or a tablespoonful for cattle.

4. Administer a dose of Epsom salts, and, if the afterbirth is still retained on the third day after calving, remove it by inserting the well oiled band and detaching it from the cotyledons.

Ed. Note.—Your legal question will be answered in next issue.

The richest turf prize ever offered in this country will probably be the Futurity of 1903, to be run at the autumn meeting at Coney Island, New York. The Jockey Club has announced that the estimated value of the race is \$74,000.

One very interesting feature in the Chicago fat show was the judging of different farm animals by students of agricultural colleges. Forty-six contestants entered, and of these a dozen tried in a sweepstakes for general proficiency. One Ontario student, W. J. Black, of Shelburne, entered, and got four prizes in as many separate contests, besides third place for general proficiency, making \$73 in all. Many of the other prize-winners have been trained in the States by men graduated in the Ontario College.

A case before the Supreme Court at Regina is of interest to farmers employing threshers. From the evidence it appears that a local thresher named Baxter threshed for S. Gower, of Loon Creek, and not being paid, helped himself to the quantity of wheat he was legally entitled to as payment for his work. But this was done after the 30 days allowed by law for so doing had expired, and without employing a bailiff. So Baxter was tried for theft and fined \$30. You must secure your legal rights in a legal way.

A meeting of farmers who are dissatisfied with the working of the Manitoba Grain Inspection Act was held at Manitou on Dec. 20th. After full discussion it was agreed to petition parliament to rescind the Act on the ground that it is detrimental to the interests of the farmers, because it tends to hampering the operations of small dealers, thereby limiting the amount of competition on the grain market. They also call for authority to compel the railway companies to furnish cars without undue delay, the car to be loaded within 48 hours after being placed. They also call for grading by means of three grading inspectors instead of by one, as at present.

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FLEMING'S
LUMP JAW
CURE



What was the cow or steer worth before Lump Jaw appeared? What is it worth now? Its value need not be depreciated one cent; you can remove every trace of the disease with

Fleming's Lump Jaw Cure
Always cures, seldom leaves even a scar. One to three applications only needed.

St. George, April 6th 1899
Messrs. Fleming Bros.—The bottle of Lump Jaw Cure that I got was used on two of my cattle—one had a lump on the throat as large as your fist, two applications completely cured it. The other had a large lump under the ear, two applications have reduced it, but one more will be required to completely remove it. I have still two-thirds of the bottle left. I can sincerely recommend your remedy, as experience verifies all you claim in its favor.

ASHTON H. BAWTINHEIMER.

Our Illustrated Pamphlet is worth reading. Contains valuable information for farmers and stockmen. FREE to readers of this paper.

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NO SPAVINS

The worst possible Spavin can be cured in 45 minutes. Curbs, Splints and Ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

Write to-day. Ask for Pamphlet No. 1.

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FOREST HOME Shorthorns, Yorkshires, B.P. Rocks

9 BULLS

9 HEIFERS



The get of Robie O'Day (22672), 1st for hull and get Winnipeg; 1st at Brandon. The heifers are in calf to Veracity (31449)—a pure Scotch hull of great quality, an easy first at Winnipeg and Brandon.

Our Yorkshire herd is headed by imp. Surmer Hill Premier (3726)

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ANDREW GRAHAM, Pomeroy P.O., Man.
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The Gold Standard Herd.



I am offering for sale a number of nice young sows in farrow, also three nice lengthy September boars, good ones. I am hooking orders for spring pigs, from large mature sows of the real hacon type, and sired by two grand prize winning boars, that are bred right up in "the purple," unrelated pairs and trios supplied. Correspondence solicited. Ask for catalogue.

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SHORTHORN & AYRSHIRE CATTLE.
Yorkshires, Berkshires, Shropshires.

JANUARY OFFERING

25 Shearling & Ram Lambs

2 Ayrshire Bulls

80 Fall Pigs all littered since summer fairs.

PIGS ALL AGES—BOTH BREEDS.

Shorthorn herd headed by "Judge," 23419, and imported "Jubilee," 28558. The females are rich in the blood of the most famous families. Ayrshire herd headed by "Surprise of Burnside." Females of the highest quality from the best strains. Yorkshire herd headed by "Oak Lodge Mighty 7th," and a recent importation of the approved hacon type, with a large herd of females of the choicest breeding. Berkshire herd headed by "Nonpareil," with 30 breeding sows of faultless conformation and superior breeding. Farm one mile from the station. Visitors welcome

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operate that any bright boy or girl by following instructions can with a little practice make good photographs. The outfit consists of 1 Camera, 1 box Dry Plates, 1 pkg. Hypo, 1 Printing Frame, 1 Developer Tray, 1 pkg. Developer, 1 set directions, 1 Toning Tray, 1 pkg. Fixing Powder, 1 pkg. Silver Paper, and 1 pkg. Ruby Paper. Our agents find these Little Pina Veys cameras are set with Colored Stones of great brilliancy. Cut out this advertisement, send it to us, and we will send you a camera. Sell them, return money, and we will forward your camera to you. Write to-day. Little Pina Veys Co., Box 1103 Toronto.

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Are world beaters. Our trunks and valises are of the latest and best designs.

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With complete outfit for selling only 15 gold topped Lever Buttons at 10c. each. This Camera takes a 2x2 picture, and is so simple to operate that any bright boy or girl can, with a little practice, make good photographs. The outfit consists of a Camera, 1 box dry plates, 1 package hypo, 1 printing frame, 2 developing trays, 1 package developer, 1 package fixing powder, 1 package ruby paper, 1 dozen sensitized papers and a full set of directions. Mail us this advertisement and we will send you the buttons. Sell them, return the money and we will forward your camera, carefully packed, free of all charge. Write to-day. Lever Button Co., Box 1103 Toronto



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IF YOU want a good PUMP try one of our CATTLE PUMPS, fitted with Porcelain lined Cylinders, and fills a pail in about three strokes.

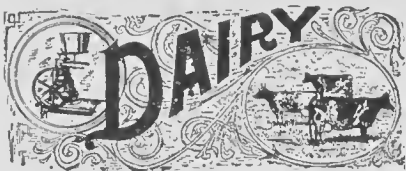
We have a large stock of Wood Pumps and repairs always on hand. Satisfaction guaranteed. Agent for Myers' brass-lined Cylinder Pumps and Hayes' double-acting Force Pumps. Write for catalogue. Office and factory—9th Street.

BRANDON PUMP WORKS,
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149 SONGS

Complete with words and music. A grand aggregation of musical gems, which every lover of music should possess. The songs contained in this book comprise the most popular sentimental, comic, operatic and Ethiopian selections, and I bear in mind that both words and music are given. Bought in the ordinary way, in sheet music, these songs would cost as much each as we ask for the whole collection, neatly bound in a handy book, which will be sent postpaid for only ten cents silver. McFarlane & Co., Toronto.

C. L. Holmes, Olds, Alta., Jan. 3rd, 1901: "I consider The Nor'-West Farmer a dandy, worth its weight in gold to the farmer who is fortunate enough to take it."



Dairying in New Zealand.

Of all our colonial rivals in the British dairy markets, New Zealand is the most steadily progressive. It is rather flattering to find that from Canada have been drawn her best teachers. Their conduct and general popularity in that colony go to show that those teachers owe much of their popularity to their good sense in dealing with the difficulties incident to the introduction of high class dairy work among a pioneer population. It is curious to note in how many particulars the dairy perplexities of that far away colony correspond with our own. Poor cows poorly managed, milk made partially worthless by bad handling and not very clean vessels, unskilful making and curing are the matters discussed in the report noticed in our last issue, from which we now cull some of the points worthy of attention here. It is the butter and cheese makers, their instructors and inspectors and one or two buyers who do the talking.

THE COWS.

Mr. Ruddick—I will just say a word about the management of the dairy herd, for that is a matter which lies close to the root of success. I am not an advocate of any particular breed, and I would not advise dairy farmers, as a rule, to go in for the breeding of pure stock, as they cost too much money. But I think it would be better for the dairy industry if more attention was given to the matter of bulls, because it is a well-recognized law in breeding that the young stock are more apt to follow the characteristics of the male parent than those of the mother. Therefore, it is a safe principle that the bulls should be selected from good milking strains, because in no other way will the future usefulness of the herd be more improved. Then, as regards the herds themselves, I am not the advocate of any particular breed, but believe that we should select according to type rather than breed. We have in all the breeds animals which show the milk-giving tendency, and also the beef-giving tendency, in a greater or lesser degree. Now, we should select the former as much as possible. Not that I would disregard the beef qualities altogether, for in a country like this, where all the calves are raised, the beef-making qualities of the surplus male animals is worth considering. Possibly no breed will be more useful on the whole than a good strain of milking Shorthorn.

Mr. Kinsella, discussing the subject of "starters" in cream ripening, reiterated the importance of thorough cleanliness at every stage of milk handling, a point some patrons all the world over are prone to overlook. He says:—

"It is very important to have all cans, pails, dippers, coolers, and strainers scrupulously clean; they should be washed first with tepid water and soda, and then thoroughly washed off with hot water before being scalded. This matter of cleanliness is one which I, at one time, did not think it would be necessary to touch upon in this colony, seeing that it has been thoroughly thrashed out and constantly kept before the butter and cheese makers for years past. But after having carefully looked into the methods adopted in many factories, particularly in cheese factories, in the preparation of the ordinary soured whole-milk starters, I find it is almost an utter impossibility for them to get good results under the conditions in which these starters are prepared. In many places starters were prepared simply by a can of milk being kept from one of the suppliers, and left to ripen on the open receiving stage of

the factory. The cans in many cases were found to be anything but clean, and to have no covers on, which left every possible chance for dust, or any bad germs that might be floating in the air, to settle in the milk and there form a grand seed-bed for the most destructive flavors. Not only this, but the milk was held at a temperature of 86 degrees to 90 degrees Fahr., which is a most favorable temperature for assisting these germs to rapidly develop into bad flavors."

Another critic objects to the presence of pigs near the milking yards and factories, even a too nearhand dung heap supplies plenty of bacteria which find a place in the air and thereby in the milk. It is a wonder, he says, how factory men can take fine cheese and butter out of such milk.

Dealing with the milk suppliers is another delicate problem everywhere. Mr. McGowan says:—

"If a supplier presents his milk at the factory daily, and has it weighed in without comment, it is only natural that he should consider it to be satisfactory, and conclude that he is doing all that is necessary or required of him; and is it not unreasonable to expect this man to devote more care to the treatment of his milk than he is doing, merely for the love of work? I say it is, and hold that we have no right to expect milk-suppliers to be versed in the fine points of our business. We ought to bear in mind the fact that a farmer's experience with milk is in most cases confined solely to the produce of his own dairy, and as it is a weakness with most men to consider their own goods as standard quality, very few farmers are competent to judge whether their milk is really sound or otherwise.

"Before I proceed further, I wish it to be clearly understood that my statements are not made in an aggressive or depreciative sense towards the men connected with this business, but are based more on past experience and the assumption that most men will perform an allotted task with the least possible worry over what they consider to be mere details; and unfortunately many farmers, and even some factory managers consider it all humbug if they are asked to exercise any special care over their milk.

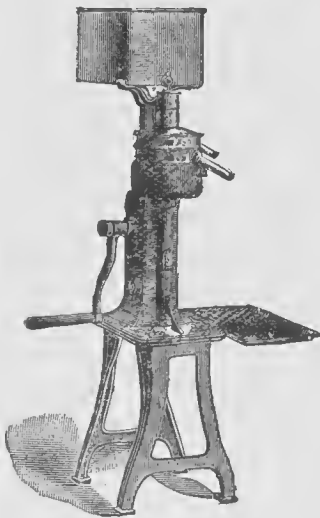
"As I said before, we have, of course, many farmers with quite conscientious scruples concerning their milk, men who are ever anxious that it should arrive at the factory in the best possible condition, but who have not sufficient knowledge of their business to achieve this result. Unfortunately, they are not all built this way, for a very different man is he who considers any milk good enough for factory purpose, and refuses to take any special care regarding cleanliness, either at the time of milking or when handling the milk afterwards. This class of milk-supplier usually considers straining, aerating and cooling as altogether superfluous things, to be written and talked about but never practised, and are generally well satisfied so long as their milk is passed by the man at the milk stage door, their only thought about it being to draw its money value at the end of the month.

"My object in citing these two distinct classes of faulty milk-suppliers is to roughly outline the work with which we are dealing, and I think they may be taken to be fairly representative of the two extremes. The first man only requires knowledge of how to do his work properly to enable him to supply good milk; the other requires both knowledge and compulsion to fetch him up to the mark, and is not likely to alter his way so long as he can find a market for his inferior stuff at the same rates as his more careful neighbors.

MILK INSPECTION.

"My contention, then, is that the milk-suppliers are not always the sole delinquents when their milk is not just as sound as is desired, and that our factory managers must at least accept a portion of the blame so long as they continue to countenance such careless

A GOOD Cream Separator



SAVES money for the dairyman and increases his profits. That's good, but there's something still better. The BEST Cream Separator will make more money for you than one which simply is good.

The Sharples

is the BEST Cream Separator made—best because it does more satisfactory work than any other, gives you more cream, smoother cream, more churnable cream, and is less troublesome to run. We don't ask you to take our word for it. Have one sent you on trial, and test it for yourself. That's the only way you can tell anything about it. Send for full particulars of our free trial offer and Catalogue No. 73.

THE SHARPLES SEPARATOR RECEIVED THE GOLD MEDAL OVER ALL COMPETITORS AT THE PARIS EXPOSITION.

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Sold by all leading dealers.
IMPROVED FOR 1901.

No.	Holds.	Churns.
0	6 gals.	1 to 3 gals.
1	10 gals.	1 to 5 gals.
2	15 gals.	2 to 7 gals.
3	20 gals.	3 to 9 gals.
4	26 gals.	4 to 12 gals.
5	30 gals.	6 to 14 gals.
6	40 gals.	8 to 20 gals.

PATENT FOOT AND LEVER DRIVE.
PATENTED STEEL ROLLER BEARINGS.
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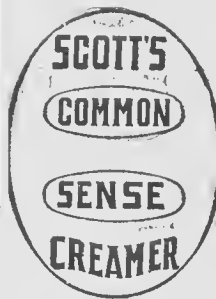
DAVID MAXWELL & SONS,
St. Mary's, Ontario, Can.

Manitoba Dairy School

THE SIXTH SESSION WILL OPEN
ON JANUARY 7TH, 1901.

A full course of instruction in Home Dairying, Butter and Cheese making, and all work pertaining to the Dairy Industry. For information and application blanks, address—

C. A. MURRAY, Dairy Supt'nt.
WINNIPEG. - MAN.



Something to suit the times—for beginners in dairying and farmers who would not find it profitable to buy a Cream Separator.

If you want a Cream Separator, however, you will do yourself a great injustice if you buy without first seeing what I have to offer, as I am this year introducing a new machine of very superior merit. Write a post card and get 116 pp. Catalogue.

Wm. Scott, 206 Pacific Ave.,
Winnipeg.

practices by providing an outlet for this unsound milk. I look on it as a manager's duty both to himself and to his employers to first educate his milk-suppliers on the proper methods of handling and treatment of milk so that it may be kept sweet and sound; and then, should any supplier fail to deliver it to the factory in a satisfactory condition, to have it rejected and returned.

It would greatly assist and strengthen a manager in carrying out this work if he would always remember that it is a decided injustice to those who do supply good wholesome milk to have their's contaminated and reduced in value by being mixed with that of their more careless or ignorant neighbors. I feel sure that so soon as the milk producers can be induced to see this in its proper

light the majority of them will be just as anxious for improvement as are our most careful factory managers. To whom must we look for this much-desired improvement? We know the care and treatment of milk prior to its delivery at the factory is, and must remain, entirely in the hands of the milk suppliers, and we have to look to them to carry out any work for its improvement. But that is not the question I wish to get at. What we have to consider is, who should take the initiative in this matter? I am of opinion it is our factory managers, for I believe there are hundreds of conscientious farmers supplying faulty milk to our factories who are altogether unaware of the fact—men who would, if they were only aware of it, do their very best to remedy matters, and would, if they knew how, keep and deliver their milk sweet and sound.

"The government could not find, and if found, could not pay for inspectors to do this. The factory manager knows the men he has to deal with. He sees them every day. Complaining to a man about the condition of his milk, and informing him that it is not up to the mark, is a delicate subject, and requires a great amount of tact, and to be successful you have to take a man in the right way. If you approach him in the wrong way it is difficult to accomplish anything. You simply get a man's back up and he will not budge. No matter what is said or done, it is very difficult to accomplish anything when a man becomes offended at any action taken. Where a man knows his suppliers well, and comes in contact with them often, it is easy to take the thing in a quiet way, and, as Mr. McGowan says, most men are more easily led than driven. There is a considerable amount of trouble in working some men. You have to make an allowance and not go too roughly about it. You cannot expect a man to improve at once. Bring him to see it is to his interests, making a point of knowing that he understands how to look after it, and then send it back. I have had a good deal of experience, and I cannot say I have found a man whom I could not improve if taken in the right way—some in one way and the others in the other. I think most men are ready and willing to improve if you set it out clearly that it is to their interests to have it done. Many are amenable to reason, but most of them were very ignorant on the matter of keeping milk. A quiet talk with them will bring about a satisfactory solution sometimes, but not so in all cases. For obstinate cases the best argument is sending back the milk. I do not think it would be well to make too great an advance in the matter of inspection all at once. But the man who takes all the trouble with his milk should not be paid on the same basis as the man who is careless. I think that payment should be made partly on the condition of the milk. If outside inspectors are appointed, I think it will not do. The manager is always on the spot. If the government were to take up this idea of appointing inspectors to look after the supply, I am sure a large number of people would simply go out of the business. They would hold the opinion that they were being harassed unnecessarily. I think that if a manager has any tact and common sense, it would be only a matter of time before he could win the confidence of the suppliers; and when this is done he would be able to get a better quality of milk."

The above pointers are not taken from any one man, but the aggregate opinions of nearly half a dozen. To these we may add Mr. Ruddick's own views on the same question of milk inspection:—

"The tender point is that if you reject milk so many are situated in such a way that they can take the milk to some other factory. It is a rather difficult matter to arrive at a remedy. The only way is for no factory to accept milk from suppliers coming from an adjoining factory unless it is understood why the milk comes. It is a barrier to progress for any factory to accept milk

from a supplier when the milk has been rejected at another factory. Factories should recognize this principle. I know many managers are hampered by reason of this difficulty, and it is a pity that it should be so. When suppliers are so situated that they can take their milk to another factory they become very independent in matters of this kind, and it is difficult to deal with some people under such circumstances. If factories would resolve not to work against each other it would help the dairying business wonderfully, by strengthening the hands of the managers in dealing with the question.

"I believe thoroughly in milk inspection, but the man who is to do it must have extraordinary tact and judgment. A man who is not a pretty good judge of human nature will never make a successful manager. You have to get a man who can teach. A Mr. McGowan says in his paper, there are any number of people who could do right if they knew how. Then there is the indifferent fellow, who has to be treated in a different way. I do not think that close supervision of the supply increases the manager's work so much, because while he is increasing his work in one way, he is decreasing it in another—that is, in the making. But if a government inspector comes along, he cannot deal with them in that way, he will be kicked out of some places, and all sorts of difficulties will arise. There is no part of the dairy factory work which needs greater skill than the receiving of the milk, because the man who does not know the raw material cannot carry on his work with a high degree of success. It is important that the best man in the factory should be on the receiving stage and pay strict attention to the milk as it comes in, so as to introduce such modifications as are necessary during the progress of manufacture to secure uniform results. I have been, perhaps, in as many cheese factories as any man living, and I have noticed that men who pay strict attention to this point have very little complaint in regard to the quality of the milk they receive. I want to make myself quite clear. I believe in the principle of inspection, but I want to know how to carry it out in actual practice, and the plainest course is to make the factory manager the judge of the quality of the milk he is to manufacture."

THE GOVERNMENT INSTRUCTOR.

"The last inspector employed by the government has lately been managing one of the most successful factories in the island. We aim at having enough instructors to be able to say, 'When you go to a factory, you are to stay there till you think you have accomplished all you can do. If it takes a week, stay there; but stay sufficiently long to overhaul the work, and make it plain how you would go about improving the condition of things at that particular factory.' We also desired the inspectors to give careful attention to the question of milk supply, and where milk was found to be defective, they were to visit the farms, if possible, and see the conditions there. Where skimming stations were connected with the factory, they were all visited and the milk inspected, and this particular phase of dairy work gone into. Then, it was part of the instructor's duty to furnish a full report to the chairman of directors, telling exactly the condition of things as he found them at the factory, and also reporting to the department on the visit. These reports have been found very useful, as giving a clear idea of the difficulties of factory work and of the need for further improvement."

This is the method adopted by Mr. Ruddick and carried along by Mr. Kinsella, for New Zealand, and if Manitoba is to have cheese worth selling, some similar plan will have to be carried out here.

Wm. A. Brown, Yellow Grass, Assa., Jan. 8, 1901:—"I can't do without The Farmer, even though we had no crop last year. We must have The Farmer to show us how to grow one next year."

JANUARY 1st, 1901.

The Opening OF THE New Century

MARKS the opening of our
own direct Offices, Stores
and Shops, and a new era in
the CREAM SEPARATOR IN-
DUSTRY in Western Canada.

THE DE LAVAL SEPARATOR CO.

General Office, 74 Cortlandt St., NEW YORK.	Canadian Office, 236 King St., WINNIPEG.	Western Office, Randolph & Canal St., CHICAGO.
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The Dairy Season.

Canada has reason to be proud of the record with which her dairy industry closes the century. The progress and development of the cheese industry has been steady and ever upward. Our butter, too, shows great improvement and we are justly proud of the glory that both our cheese and butter won us at the recent Paris Exposition. In 1893 it was our cheese alone that won us renown. Now, seven years later, it is our butter as well as our cheese, and the latter has held its place at the top. This is no small thing in itself, for it is often more difficult to hold foremost place than to win it. This shows that our butter is making progress, and it is gratifying to know that it is gaining an excellent reputation on the British market.

The make of cheese in Canada this season has been the largest in the history of the country. The total export is estimated at 2,077,842 boxes, or 180,986 more than was exported last year, and 177,000 more than that of 1898. Not only has the make been the largest on record, but the price per pound is a record one, too. Owing to a short supply in England, due to last year's drouth, good prices prevailed last fall, during the winter and held well up all season. The price paid last year was the highest in the history of the country, but this year has averaged about 25c. greater, or \$8 a box, as against \$7.75 last year, and \$6.35 in 1898. In Eastern Canada the season has thus been a most profitable one. In the west it is gratifying to learn from the December crop bulletin that the output of Manitoba cheese shows an increase of over 20 per cent. Its quality is not as good as we would like, but that will improve, we hope, in the near future. The make in Manitoba is placed at 1,021,258 lbs. this year, as against 848,587 lbs. last year. The high price of cheese during the year was,

no doubt, a large factor in the increased production.

The butter trade of the Dominion has not shown as large a volume for the year as was hoped for, and the glow of pride occasioned by our successful cheese season is rather dampened when we find that the exports of butter are only about one-half what they were in 1899. While our sister colonies have been making progress, we have been going behind. The exports from May to the close of navigation show 256,563 packages as the total quantity exported, as against 451,050 in 1899—a decline in money value from \$5,998,000 to \$3,640,000. The price, on the other hand, is about 70c. a package greater than that of last year. There is no doubt that the high price of cheese led to more of that article being made, to the detriment of the increase in butter. It is likely that later returns will show that the quantity of butter is larger than that reported to have been exported at the close of navigation. Then in our own west the growth of butter making has been most remarkable. As a general thing all the creameries show a marked increase, both in Manitoba and the Territories. The increase of all kinds of butter in Manitoba is nearly 43 per cent, or 1,001,382 lbs. more than was made last year. The make of dairy butter shows an increase of 50 and creamery over 25 per cent.

The amount of butter which Canada exported for the 12 months ending with October is less than one-fourth of the quantity sent to the mother country by her colonies. Australia sends 52.59 per cent., New Zealand 23.60 per cent., and Canada 23.81 per cent. But the quantity of butter sent to the United Kingdom by the colonies is but a very small portion of the enormous quantity used. The supply ranges from 240,000 to 300,000 cwt. per month the year round. In 1898-99 Canada's supply was only 6.4 per cent. of the total amount. This gives some idea of the opportunity we have of extending this line of farm work.

Satisfactory Showing of Fair-play Creamery.

Wm. Grassick, secretary of the Fair-play creamery at Pilot Mound, sends us the following statement in regard to the standing and business of that most successful factory:—

ASSETS.

Building	\$1239 05
Plant	1406 56
Due on shares sold	329 95
Shares unallotted	30 00
Stock on hand	5 00
Balance in bank	13 00
Due on butter sold	112 95

\$3136 51

LIABILITIES.

Government loan	\$400 00
Sundry accounts	25 00

\$425 00

Value of assets over liabilities. 2711 51

\$3136 51

BUTTER ACCOUNT WITH PATRONS.

RECEIPTS.

Total amount received for butter	\$17771 56
For buttermilk	119 60

\$17891 14

DISBURSEMENTS.

Paid expenses	\$13412 62
Discounts and interest	155 03
Cost of manufacturing	4290 83
Due patrons	32 66

\$17891 14

Total amount of butter made during the season, 92,276 lbs.

Average price for butter, 19.39 cents.

Cost of manufacturing, 4.65 cents.

COMPARATIVE STATEMENT.

YEAR.	No. of lbs. Butter made.	Value of Butter.	Cost of Manufacturing per cwt.	Average price per lb., cts.
1896	38,370	\$6215.00	\$4.87	16.05
1897	49,831	8736.72	5.00	17.75
1898	59,116	10842.85	4.75	18.20
1899	68,313	12548.88	4.67	18.36
1900	92,276	17891.14	4.65	19.39
	307,906	\$56234.59		

These statistics make very satisfactory reading. For a creamery association to have assets amounting to \$3,136.51, with liabilities of only \$425.00 is a condition of affairs rare indeed in this country. The comparative statement, which Mr. Grassick notes in his letter is "without varnish," shows, as will be seen, a rapid increase in manufacture, with a corresponding dropping off in cost of manufacture per lb. Well done, Pilot Mound!

The Dairy School.

The Government Dairy School at Winnipeg opened on January 7th. The instructors employed are F. Lutley, for butter; J. R. Nisbett, for milk-testing, and J. D. Moran, for cheese. Twenty-two applicants in all have so far sent in their names, but some of these will not come in this month. The supply of milk is this year more abundant than ever before. Hand-power separators are being put to special tests. They are of six different makes—Melotte, Mikado, DeLaval, United States, National and Alexandra. A DeLaval steam turbine is also in operation.

Qu'Appelle creamery has made 25,000 lbs. of butter for the season, a gain of 8,000 on last year's output.

The annual convention of the Cheese and Butter Makers' Association will be held in Winnipeg on February 20th, 21st and 22nd.

BOLE'S CONDITION POWDER

In 1 lb. packages, 25 cents per package.

A capital tonic, diuretic and vermifuge

For Horses, Cattle,
Sheep and Hogs.

The Best Medicine made for Horses.

How a Good Creamery Helps a District.

"You have no idea," said the president of a live creamery combination, "how much a good creamery does to educate a whole district." It is a great educator. We were very raw when we started, and had about everything to learn. It taught us intelligent and equitable co-operation and when we come to do business now we do it smoothly and pleasantly instead of every crank wanting his own way and kicking over the traces when he is contradicted. And we go on learning every year. Till you begin to handle milk you have no idea of the importance of scrupulous cleanliness and doing every thing the right way and no other. Besides training our own patrons, the influence spreads all over. An old-established storekeeper said to me the other day that the butter he gets from people who still stand aloof from the creamery is 50 per cent. better than before it started. 'You knew, so and so? I am buying his butter

The management of the Western Canada Branch of the DeLaval Separator Co. has been assumed by Fred. J. Weed. Commencing with the new year, the offices and warehouses of this branch will be found on McDermot ave., almost opposite The Nor-West Farmer office. The new manager is the first "Weed" that we have ever felt free to welcome, and we believe our dairymen and farmers generally will be able to make friends with him also. We believe he is a "milk weed" or buttercup.

A meeting of the creditors of A. A. Jory, of the Rapid City creamery, was held there the other day. Claims to the amount of \$1,200 were entered, and it is thought the estate will pay 50 cents on the dollar, less expenses. This failure is partly due to Mr. Jory having agreed to pay a much higher rent for the factory and equipment than it was worth.

At Whitchurch, Eng., is held one of the largest local dairy shows in England. The last show had eight classes and 332 entries.



Mounted Infantry.

Snapshot taken at Indian Head, Assa.

right along now, and before the factory started I never took a pound of it."

"We bind our buttermaker to make perfect butter, and he insists on the collector bringing only right cream, and if that cream is not what it should be it stays at home. The result is that every one does his full share to bring about the desired result. Some people think we are too particular. For example, we sack every package we send out and that alone costs us \$150 a year perhaps, but the consumers in B.C. notice it and it serves as a guarantee for the quality of what is inside. That, again, means half a cent, perhaps a whole one, on the selling price, and we get it all back in that way. Our last ten weeks' make sold at 22c. f.o.b., and though we cannot boast of making butter as cheap as some do, our character is worth money on the market, and we take care of that character. The last cream we collected had a taste of stink weed in it. That was sold by itself for what it would bring and so our good name was left untarnished. We are really getting proud of ourselves, and why shouldn't we?"

John McNichol, Wetaskiwin, Alta., Jan. 8, 1901:—"I have had more than ten times the subscription price of The Nor-West Farmer from the Veterinary Column alone."

An English grocer was fined \$75 and costs the other day for selling margarine for butter.

Dietetic authorities say that a quart of milk contains the nutrient value of three-quarters of a pound of beef.

A man was recently heard to complain that his cow ate well, gave a fine mess of milk, "but she will not get fat." That cow knows her business, neighbor, and possibly better than you do.

During the twelve months ending with the 30th June, 1900, New Zealand exported butter value £693,666 and cheese value £224,238, as against butter value £451,269 and cheese value £127,209 for the previous year.

Joseph Morton, Moosomin, Assa., Jan. 2, 1901:—"I would not be without the Nor-West Farmer if it cost twice the money, as I find lots of useful instructions in it. No farmer should be without it. I was well pleased with the Christmas number."

Cairns Bros., Carnduff, Assa., Jan. 5, 1901:—"Please find enclosed our renewal subscription for The Nor-West Farmer, which we find it impossible to get along without. Having been almost continuous subscribers since 1884, we are more pleased than ever with the continued improvements in your valuable paper."

A Neepawa Farmers' Meeting.

At its recently held annual meeting the Beautiful Plains Agricultural Society showed an income of \$2,788 for the past year and an unexpended balance of \$16.60, with valued assets over liabilities of \$2,400, though the prize list was \$300 more than that of the previous year. After electing ten well-known and capable directors, attention was given to one or two points of practical interest in connection with the work.

According to the report of one of the local papers, a motion was raised by Messrs. H. Irwin and J. B. Govenlock, "that no prizes be given to animals three years old and under that have not thoroughbred registered sires and dams."

This motion, we are told, produced some discussion. One of the members claimed that often an ordinary colt, without any breeding was the peer of a well-bred one. Mr. Irwin said that ordinary colts, as suckers, often looked better than well-bred ones, but when the colts reached a saleable age, the well-bred one was worth from \$10 to \$50 more than the scrub. Mr. Irwin went on to show that the conditions for registering standard bred horses were much more onerous in the matter of breeding than formerly. He was in favor of encouraging the better breeding of stock, and thought that the motion was a step in the right direction. The motion was carried.

It was moved by J. A. McGill, and seconded by Geo. Hamilton, that in the opinion of this society it is highly important that an agricultural college be instituted in this province for the better education of our farmers on subjects connected with the farm, that they may more successfully compete in the world's markets. This motion was carried unanimously.

Mr. Irwin next moved that the society take up institute work. Besides calling for the speakers promised by the government, it was agreed to hold an institute meeting on the second Friday in January, when H. Irwin and S. Benson will speak on the subject of "Farm Labor," and Messrs. Geo. Hamilton and J. Laidler on "The Export Cattle Trade."

This is a move in the right direction, and we hope the example of Neepawa will have many imitators this winter.

Two points, however, in the first resolution passed at this meeting certainly need a little clearing up. Did these intelligent farmers use the term "thoroughbred?" "Thoroughbred," as they well know, is the proper term for the pure-bred English race horse and is always used with the capital T. For every other breed of animals the proper term is "pure bred." Secondly, did Messrs. Irwin and Govenlock mean to insist that the dams as well as the sires should be pure bred, or was it only a blunder of the writer of the resolution? It is certainly very queer looking to call for such a thing if the printed copy of the resolution is really what was meant. Pure bred dams are not essential to the production of good stock, but, generally speaking, pure bred sires are. In fact, if we mistake not, the mover of this motion showed some very creditable stock at the fair the past summer which was not bred from registered dams. The point is that agricultural societies cannot be too careful as to the wording in their prize lists and resolutions, as mistakes here are sometimes the source of very much trouble.

(Note.—Since the above was put into type, the local paper referred to corrects itself in a later issue in regard to the supposed requirement that dams of all stock shown be pure bred. The stipulation is that all stock shown be sired by pure bred males.)

New Towns on the Gilbert Plains.

Of the various parts of Manitoba which in the past six or eight years have made substantial development, the broad area west of Dauphin, comprising what has roundly been termed "the Gilbert Plains," stands as one which has indeed made an enviable showing. Until lately, however, the farmers of that district have been very seriously handicapped by reason of the distance from markets. In the earlier years of settlement all market produce had to be teamed across the awful trails which led through the forest wilderness of the Riding Mountains to Minnedosa, Strathclair, Russell and other towns on the Manitoba and Northwestern Railway, some 60 or 70 miles away. In the fall of 1896 the Canadian Northern railway was built to Dauphin, and that town was at once commenced. From that time all the trade from the settlers of the Plains, some of them 35 or 40 miles away, has been tributary to Dauphin, and has been no small factor in building up that town.

The Gilbert Plains extension of the Canadian Northern Railway, which was commenced in 1899, was taken up again last year, and three stations, Asheville, Gilbert Plains and Grand View, were opened in the fall. On October 2nd a sale of town lots at Gilbert Plains and Grand View was held, and town sites were exploited at these two points. Supt. Hanna has informed us that about \$8,000 to \$9,000 worth of town lots were disposed of at that sale, the highest price being \$310 for a 50-foot frontage. We expect about as much more property was sold before the close of last year. This evidences a pretty substantial confidence in the district by business men. The town of Gilbert Plains is located 20 miles west of Dauphin, and about three or four miles north of Glenlyon. It occupies the centre of a splendid and well settled agricultural district.

Grand View is situated ten miles farther west, on the Valley river, and, although the district which it will serve is not as yet quite so well settled, its establishment will be the means of opening up the country further back.

Some of the advantages with which the Gilbert Plains as a district is blessed are a supply of wood in the Riding and Duck Mountains, which is practically inexhaustible, a soil which in fertility is unsurpassed in few, if any, parts of Manitoba; shelter by the mountains from the open sweep of storms in winter and hot drifting winds in the summer, and last—but by no means least—settlement by an intelligent and progressive class of people. The crops grown there the past few years have been heavier than in most other parts of Manitoba.

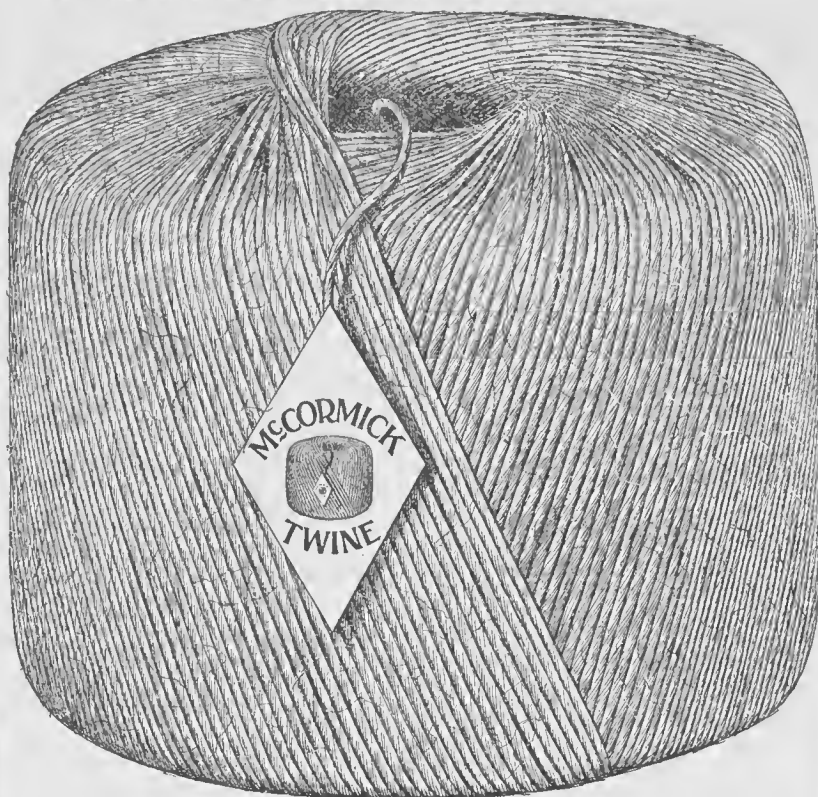
We cannot but congratulate the farmers of the Plains upon seeing the beginning of the consummation of what they have for some time been striving for, i.e., a home market.

We are sorry to learn that D. A. Reesor, jeweller, of Brandon, has been burned out. Mr. Reesor has secured other premises and is again ready to do business as usual.

The J. I. Case Threshing Machine Co. report a much greater volume of business than they expected, a very large trade being done in the Edmonton district. The amount of tough wheat, due to bad weather, was a severe test for all threshing machines, but the company are proud to say they had not a single complaint against their machine. Their 25-horse-power engine is much liked as a rapid raiser of steam and good traveller. The new feeder on the separator has given every satisfaction, the new half-moon knives on the band-cutters proving a great success in tough grain. The firm intend to put on the market next year a 25-horse-power simple engine and a 30-horse-power compound.

Right
Length

Right
Strength



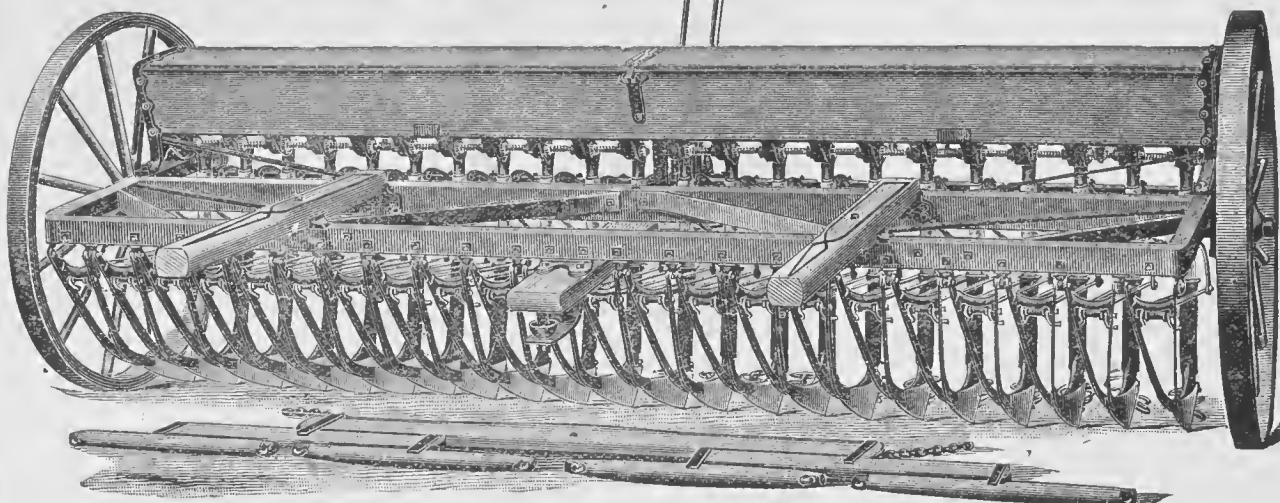
Spun
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Baled
Right

It is made at our immense new Twine Mill, which has the latest and most improved machinery the world has produced.

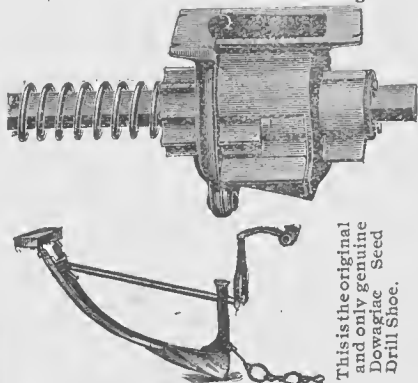
McCORMICK HARVESTING MACHINE CO., CHICAGO, ILL., U.S.

DOWAGIAC SHOE DRILL



THE GREATEST SUCCESS IN THE HISTORY OF GRAIN SEEDING MACHINERY

Look for the Sheaf of Wheat on the grain box, and do not accept an imitation for the real Dowagiac. We are sole manufacturers, and no others are authorized to use the name.



This is the original
and only genuine
Dowagiac Seed
Drill Shoe.



The closest fitted and most accurate feed in existence.

Lathe fitted, and the spring keeps all parts together even after years of wear.

SEND FOR CATALOGUE.

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FARGO, North Dakota.

Ranch Horses in Ontario.

On Jan. 9th, Messrs. Stewart & Burton, of Fort McLeod, Alta., offered for sale by auction in Toronto 42 head of ranch colts from Shire, Clyde and Percheron sires. There was a large crowd at the sale, and the colts brought from \$40 to \$120 a head. They went cheap at those figures, but the quality of these

will tell in favor of future consignments from the same sellers. Many of the dams of these colts had been taken west as breeders, and this is the first public offering of that kind of breeding.

The directors of the Agricultural Society of Portage la Prairie have fixed on July 23d, 24th and 25th as the date of their next summer fair.

The Palace Hotel

8th St. nr. Rosser Ave., BRANDON, Man.
Most centrally located hotel to the business part of the city. Accommodating porter meets all trains. Open day and night. Rates \$1.00 per Day. D. C. M'Kinnon, Prop. J. A. Le Roy, Mgr



While our columns are always open for the discussion of any relevant subject, we do not necessarily endorse the opinions of all contributors. Correspondents will kindly write on one side of the sheet only and in every case give their names—not necessarily for publication, but as a guarantee of good faith. All correspondence will be subject to revision.

Two Hereford Bulls Wanted.

Laporte Cattle Co., Superior, N.D.:—"Will you be kind enough to make it known to the readers of The Farmer that we wish to buy two Hereford bulls, from two to five years old. They must be as good as there is in Canada, and breeding must be sure. Anybody having such for sale may do well by writing us."

Book on Swine Husbandry.

Thos. R. Patterson, Hayfield, Man.: "I would like you to let me know where I can get a good book on swine husbandry—one giving full instructions on breeding, feeding and management in general. I do not want a book that is only written to sell. I want a book written by good practical men. What would such a book cost?"

Answer.—"Swine Husbandry," by F. D. Coburn, which may be had from this office for \$1.75, should fill the bill.

Pleased With the Disc Drill.

James Robertson, Glendale, Man.: "I see in the correspondence column of the Christmas number that information is wanted re disc v. shoe drills. I would just say that I have used a shoe drill almost ever since they came into use, until last spring, when I got a single disc drill—a drill that I am proud of. Where the land is in proper condition for seeding, it does excellent work, discing the ground over in fine shape and sowing the seed in perfect order. As to sowing on wet land, it will work on land that is fit for seeding. Last spring I sowed through some pond-holes that were too wet for sowing. Had the whole field been in the same condition I would not have thought of sowing it. The disc clogged a little, but nothing to hinder the proper distribution of the seed. As to draft, I consider it is more than on horse lighter than the shoe drills. Where there are roots and small stones, sometimes they may stop the disc from turning, but which does not materially affect the sowing or covering of the seed. It was an 18 disc drill I used and I could sow from 18 to 20 acres per day without overworking three horses in the least, and I seldom saw a wet hair on them. The greatest advantage the disc drill has over the shoe drill is shown where there is considerable stubble, and the surface is loose. The shoe drills are bound to drag a lot of stubble ahead of the shoes, whereas it makes no difference to the disc as it will cut its way through a pretty heavy stubble and do its work all right, so that when the grain is up you can see no misses and consequently must give a better yield in the harvest."

Lice on Chickens.

C. B. L., Steinbach, Man.: "Kindly let me know what has to be done to remove lice from chickens."

Answer.—Here, as in most such cases, prevention is better than cure. One or two wheel-barrow loads of dry earth stored up in a box in the corner of the hen house is nature's own remedy. Dry dust of any kind is sure death to lice, and the fowls know it. Coal ashes is the next best substitute. Have a large shallow box half full in which the fowls can take their own medicine when they want it. Most likely the lice are there in full force now, or you would not have been looking for a remedy. That means lots of work. Make all the roosts into firewood and drench the walls with kerosene emulsion. Dust the fowls with insect powder. If they look sleepy, the lice are in force on their heads and necks. Dust everything with lime dust. Carbolic acid mixed with the lime will make it stronger. You will have to keep on at this till both lice and nits are killed, and it is pretty certain that by that time you will have made up your mind that it is very unwise to neglect the easy and sure preventive of dry dust. For a fuller line of information, see page 372 of The Nor-West Farmer, of May 21st, 1900.

Hay Stored Above Stock.

E. C. C., Fort Pelly, Assa.: "Next summer I am going to raise my stables higher and put a thatch roof on them. I was thinking of putting a god roof over the cattle and horses, and above that to use as a loft for hay, etc. Do you think the contents of the loft will discolor and become useless from the cattle and horses below?"

Answer.—If by a sod roof over cattle and horses you mean a floor of sods laid on poles, the space above to be used as a hay loft, the safety of the hay will entirely depend on the pains you take to make that floor air-tight. Some people see little necessity for keeping the horses' breath out of the hay they are to eat, but all the same, it is to some extent injurious. It would be unpleasant for the stock, even though there was no manifest discoloration.

Squeeze in Grain Prices and Weights.

We have received a letter from a western subscriber in which he makes such serious charges against the local grain buyers that to publish them might bring on us a libel suit. One of his charges is that there has been a change of grain buyers, much to the disadvantage of the sellers, and that to get justice they must drive several miles further, where they can get \$5 a load more for the same wheat. He also says that at both the towns to which he refers scarcely a load can be sold for which honest weight can be got. He knows farmers who have been cheated as much as 8 bushels on a load of wheat. The better prices at the one place he attributes to the presence of a local mill.

These are very sweeping charges. The one the accuracy of which can be most readily put to the test is that of unfair weighing. Now, we would ask this farmer why, in a district where wheat is the principal product, the men who feel aggrieved cannot buy a set of barn scales and weigh carefully half a dozen loads before going to market. If the weight given at the elevator is only one bushel in 50 astray the evidence is there and incontrovertible. Every separate wheat ticket is bound to state the gross weight and the dockage, and the alleged sufferers have the remedy in their own hands. In this way every elevator in the place could have been tested in one day and the proof of wrong-doing secured, instead of making allegations unsupported by reliable proof, which we cannot publish as desired by the writer.

The statement that when a local mill wants to buy wheat, it pays more than the other buyers, is quite feasible and easily explained. It is not very easy by mere writing of complaints to the newspapers to correct the variations of price at any one point. But in this case there was a very obvious remedy, in the shape of a Farmers' elevator, through which every farmer can ship his product to a respectable commission agent.

square. The track was found and the appliances put up by the owner himself. The whole of the rest of the equipment cost about \$16. Steel tracks, however, are the best, as they furnish a much smoother path for the carrier. They cost about 20 cents per foot. The number of lifts required to a load depends very largely upon the nature of the hay, grain or straw. In fairly long stuff which is not too slippery, a load can be taken up at four or five lifts. Where it is short and smooth, less is taken up each time. These qualities are the most likely to hinder in handling many kinds of our native hay. For this kind of hay a grapple with six teeth, three on either side, is recommended by some. If you have a drive-way into the barn, you will, of course, unload from it; otherwise you need large doors at the end (and be sure that they are large enough) and the track will project about five feet. Regarding the question as to which is the best, hayfork or slings, we would say both are best. A hayfork is of no use to handle oat or other sheaves (as no doubt you will have to do sometimes), but it is just the thing for most classes of loose stuff. You can, however, run the fork and slings on the same track and change them as needed. In building, you will do well to see that your roof plan is strong, as there is considerable strain caused by running a hayfork. Another point (and this is one upon which a great many farmers in Manitoba have erred), do not get your top beams too high. We know of some splendid barns where these have had to be let down after the barn was up just on this account. These should be at least twelve feet below the ridge of the roof. Then the ventilators have also to be planned so as not to come up in the centre of the building and thus be in the way. Of course if you unload from a centre drive floor, they may run up in the centre close to the ends of the barn, but in that case they are more liable to freeze partly up in very cold weather. It would be well to see any unloading equipments which are within rea-

think of sowing rape for pigs? 4. What is the best way to break old hay land, the wild hay having run out, and skunk grass having taken its place? 5. What is the best hay to grow on such land, blue clay subsoil?"

Answer.—This correspondent asks some very practical questions, upon subjects upon which a good deal might be said. No doubt some of our readers will have had experience along some of the lines touched, which, if sent us, would be of interest.

1 and 2. The question of summer feeding for pigs is one which has come in for considerable attention from time to time. Of course, each farmer must be governed to quite an extent by his individual circumstances and must consider largely the sort of feed which he has on hand. But, speaking in a general way, we might say that a great majority of the farmers who go in for raising many hogs find that in the summer they should not be too closely confined, but be allowed the freedom of a pasture of some rich green grass, or a plot of green wheat, oats or barley. We know some farmers who sow some of these grains for this purpose, using nearly twice as much seed as in ordinary sowing. Then we know some very successful hog-raisers who have a small pasture field of Brome grass laid out for summer pasture of hogs, and find it very satisfactory. J. A. McGill, Neepawa, has a nice Brome hog pasture, and reports it as being first-rate. But, besides green feed, the growing hog should have a feed at least twice a day of some cheap grain ration, and it is right here that a good fanning-mill will help to pay for itself on most farms. One large hog raiser in Manitoba of our acquaintance feeds a good deal of bran to his growing hogs in the summer, but if he has cheap feed at home he will naturally use it before buying. Some years damaged wheat can be purchased cheaply, then ground and fed. But it is always best, we believe, for the farmer to grow his own feed, and this can be done by sowing barley (and perhaps peas sometimes) and by saving all the waste ends in the way



Indians from File Hill Reserve (40 miles north of railway) delivering wheat at Indian Head, Assa.

If one man has not a full ear he can join forces with his neighbors, and in that way get all there is going on the market for what he has to sell.

It is sometimes possible to get more from a particular buyer for a short time than the wheat he buys is really worth. He buys popularity by giving extra weight or taking too little dockage, and to straighten up matters at the end of the season the elevator he controls is sometimes in some unaccountable way burnt down. There are still more crooked ways of getting full value for wheat and tickets for more bushels than were ever delivered. If our correspondent has not heard of such things in his own neighborhood he might by careful enquiry learn a little more about frauds in wheat handling.

There is now a government official whose business it is to hear just such complaints as have been sent to us in this particular case. If any seller has a grievance, of which he can furnish solid proof, his proper course is to make Commissioner Castle aware of the facts, which will receive prompt attention.

Unloading Tools.

W. A. Finch, Carman, Man.: "Please state through The Nor-West Farmer the best article in use for lifting hay from a wagon into a barn. I have heard of hay forks, slings, etc., and do not know which is best for our prairie hay. Am building a new barn and putting in conveniences for handling hay. Kindly advise me."

Answer.—In our last issue of The Farmer you will find the advertisements of James W. Provan, Oshawa, Ontario, and of M. T. Buchanan & Co., Ingersoll, Ont., for the very class of goods about which you make enquiry. A careful perusal of these advertisements and a correspondence with these parties will, no doubt, bring you some valuable information, as we believe the implements advertised to be entirely satisfactory. J. H. Ashdown, Winnipeg, also handles tools made by Myers, of Ashland, Ohio. We have just been inspecting the hay-fork in one of the livery stables in this city. It is fitted to run on a hard wood track, made four inches

sonable distance, as you will see for yourself just what is needed in the way of barn planning. You will also likely get some valuable pointers from Mr. Provan and Mr. Buchanan. For ordinary work we think that the style of fork pictured in Mr. Provan's advt. the best we know of. Almost any recent farm immigrant from Ontario can tell you a good deal about unloading tools, as they are very extensively used in that province, as no doubt they will be here in the near future. Certainly they are very great labor-savers.

Meeting at Wetaskiwin.

A Wetaskiwin, Alta., correspondent sends us a report of a recent meeting in connection with the agricultural society there. A. S. Rosenroll, M. L. A., who has been the secretary of the society since its organization, read an able and interesting paper on "The Brown Cattle of Switzerland," dealing with their excellent qualities, both as beef producers and as dairy animals. He also praised them as a hardy and thrifty breed. Mr. Waterston, president for the past three years, dealt with "Rotation of Crops," and regarded oats as being the most important. The question of pea-culture in Alberta was also taken up, and quite an intelligent discussion took place in regard to the growing of various crops. We are pleased to note that this society is active and is in good financial standing. The officers for 1901 are: President, John McVicar; 1st Vice-president, Frank Lucas; 2nd Vice-president, Johnson Thirsk; Directors—John West, A. S. Rosenroll, M. L. A., David Morrison, Enoch Groves, A. T. Womax, Thos. Willows, and Waterston, C. B. Phillips, and Trueman Kelly; Treasurer, Jno. West; Secretary, A. S. Rosenroll, M. L. A.

Pig Pasture—Grass.

Wm. Elliott, Sidney, Man.: "Will you kindly give me a few pointers in your valuable paper. 1. What is the most profitable method of feeding pigs in summer? 2. What is best to sow for pasture? 3. What do you

of screenings. Then, too, skim-milk is a valuable adjunct to grain feeding, but, as we have often pointed out, yields the greatest proportionate gain when not fed too freely. Of course water and shade should always be available.

3. Rape is a capital feed the time it lasts, and should have a trial.

4. Break in the usual way and work down fine. Skunk grass is not difficult to kill in this way. If the land is suitable, we would say it would be best to take off a crop or two of grain before re-seeding to grass, as you will thus get the ground in good shape for a catch of grass.

5. You might try Brome and timothy, mixed or separate. For a permanent grass, however, we think the Brome most likely to give satisfaction.

Anent Mr. Strang's Death.

C. J. Thomson, Virden, Man., sends The Farmer the following resolution of regret, passed by the Directors of the Provincial Mutual Hail Insurance Co., of Manitoba, at a meeting held in Winnipeg on Dec. 20th:—"The Directors of the Provincial Mutual Hail Insurance Company of Manitoba resolve to record in the minutes of the company an expression of the deep regret with which they learned of the death of the late manager, Mr. Robert Strang. Mr. Strang was, it may be said, the originator of the company, as it was solely by his advice that the charter members proceeded in its formation, and it was he alone who tided it over the difficulties of its early years; and all along during the ten years of its existence he has rendered valuable and unwearied services to the company. The directors desire to express to Mrs. Strang and the other members of the family their sincere sympathy in this their sad bereavement and instruct that a copy of this resolution be forwarded to Mrs. Strang, and also to the newspapers."

[Ed. Note.—We very willingly give space to this notice. Mr. Strang has long been well known as a straight business man, in whom the public could place every confidence.]

Criticism from Senator Perley,

Wolsley, N.W.T.: "Your paper I consider most valuable to my family, who take it and read it, although I do not take for gospel all I read in it. This western country is yet young, and the system required to successfully carry on farm work here is so different from that of Eastern Canada, that it takes time and experience to solve the problem successfully. Therefore the practical tests made by farmers in different parts of the west, and reported through The Farmer are of great assistance to the wisest and best of us. Persons writing the results of practical tests which they have made, should be very particular as to stating how they made the tests and the result. I have just read in your last issue a well-written article by Mr. Mitchell, the superintendent of N.W.T. creameries. In his letter he leaves the impression that the quality of the food has an effect on the quality of the milk, and that good fattening food makes good fat milk. If I am not greatly mistaken, Professor Robertson does not teach that theory. If I have not forgotten his report on that subject as given before the Agricultural Committee of the House of Commons, he distinctly stated that good rich food had but a very slight effect on the butter fat in the milk, and that there was nearly as much butter fat in the milk of a cow fed on poor feed, such as straw, as there was in the milk of the same cow fed on meal or other fattening food. The great gain was in the quantity of milk. This cow getting good food would give more milk, and there was where the great gain came in, and not in the increase of butter fat in the milk. If Professor Robertson is right, then Mr. Mitchell's letter is not carefully enough worded; because to me he leaves the impression that good food makes richer milk.

"I am not in a fault-finding mood to-day, but as we are not farming for fun, I must say I cannot see where the profit comes in still feeding a steer with 10 lbs. of oats, and 10 lbs. of wheat a day, besides the other feed and care, the latter being an important item; because it requires great care and attention to fatten any animal, and such care and attention cost a good deal. As to this feed, oats is, one year with another, worth a cent a pound, and wheat, also, should be. So the 20 lbs. of oats and wheat, given to Mr. Bryant, of Russell, Man., as the proper ration for a fattening animal, is worth at least 15c. a day. Add to this the other feed and the care, and I fall to see where the profit comes in, and without profit no person or firm can do business successfully; and wheat and labor are cash. I would put a value on the manure, which, I regret to say, many farmers in this western country do not; but I would not value it so high as to make it in that way.

"Four or five years ago, in talking with a wealthy senator from N.B., who loans a large amount yearly on mortgages, he told me he had adopted a practice of not loaning money to farmers or others who did not keep a proper account of receipts and expenditures, because, as he stated, a man who did not keep an account of his receipts and expenditures was all at sea, and did not know how his business was getting along. He also told me that he had taken a good deal of trouble to educate the farmers of his county up to that system, and that it had resulted in great good to them. In addition to a farmer keeping an account of his receipts and expenditure, which is not a hard task, I think every farmer should keep a most accurate account of all his farm work, and that to my mind is a more difficult task than the first. I should like some of your readers to give a report through your paper as to how to best do that. If some of your patrons will do that, they will confer a great benefit on a large number of the farmers of this western country, your humble servant among the number.

"One more suggestion and I will stop. When the late Conservative Government established the several Experimental Farms in Canada, I was then a member of the House of Commons, and suggested to Hon. John Carling (then Minister of Agriculture) that in this western country the two Experimental Farms, which are a section of land each, should be divided into halves, the one half to be used, as it now is, for experimental purposes, the other half to experiment to find out what system was best to pursue, so that the settler would know how to start and make the most money and best living out of his 320 acres. The last question is the one that would do the greatest good to the greatest number of farmers in this western country. Tens of thousands are working to-day without method or system, in a haphazard way that is more liable to result in failure than success. If business men conducted their businesses in the same reckless way that most farmers do, there would be one continual succession of failures. I am not personally interested in this 320 acre farm, as ours is much larger, but if some of your readers can make out a system to follow with probable results, it would be worth more to the farmers in the west than both of the Experimental Farms, as good as they have been."

Poultry Pedigrees.

Subscriber, Glenlyon, Man.: "Is there any such thing as pedigreed poultry? The judges at our local fair last fall thought that an exhibitor of pure-bred fowl should have a pedigree showing them to be such. I have heard several express the same opinion. Through the columns of your paper kindly state the truth of the matter."

Answer by Geo. Wood, Louise Bridge, Man.: "In reply I must say that as far as I know there are only two poultry breeders in America who claim to have pedigreed poultry. It is a very difficult and expensive business to keep the true pedigree of poultry. For instance, you would have to have what is called the trap nest box. Each hen must have a leg band, numbered. Then an attendant would have to go around about every two hours to take the hens out of the

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nest and record her leg band number on the egg. Then, again, the eggs from each hen would have to be hatched by themselves. The chicks would have to be kept separate until large enough to be marked and numbered. Of course, all this takes time (and lots of it), and I am satisfied that pedigreed poultry would never pay for extra time and money expended. In fact, I don't think you will ever see pedigreed poultry bred to any extent."

[Ed. Note.—Mr. Wood's careful reply shows up pretty well the difficulties which attend the keeping of a register for fowl. In regard to the question as to whether or not a pedigree should be expected for fowl shown at a fair, we would add that such demands are never made. The bird is supposed to carry its own pedigree in the way of conformity in build, marking, etc., to this standard of the breed to which it belongs.]

Mr. Bedford's Views on Fallowing.

Subscriber, Minto Man.: "I had an argument with a neighbor in reference to S. A. Bedford's views on summer-fallowing in Southern Manitoba. I maintained that Mr. Bedford advocated deep ploughing once, and repeated surface cultivation during the growing season. My neighbor claimed that he advocates ploughing twice or thrice during the season without surface cultivation. Which of us is right?"

Answer by S. A. Bedford, Brandon.: "I give herewith the system of summer-fallowing found most successful on this farm. Just as soon as the weed seeds have germinated, about the last week in June, the land is plowed seven inches deep, and each day's plowing is well harrowed before night. This destroys one crop of weeds and leaves the land in the very best shape to encourage a second crop of weeds to start. As soon as this second crop of weeds is noticed on the surface, as tiny red threads with two partly developed leaves, the harrows are immediately set to work, this time going crosswise of the last harrowing. If the work has been properly done, every one of these small weeds will have been destroyed. This same plan is followed throughout the season, but usually after the second harrowing the land has become so level and solid that a harrow makes very little impression on it. A solid-toothed lever cultivator is then used in the place of a harrow, and this will destroy the weeds, even if they are two or three inches high. The only time when this summer-fallow is plowed twice is during seasons similar to the past one, where it was almost impossible, owing to constant rains, to destroy weeds by harrowing. When this usual black loam soil of Western Manitoba has been prepared as above, we do not find it necessary to harrow in spring; we simply drill as deeply as possible. This encourages rapid germination and reduces the risk from drifting soil to a minimum. But stiff clay loam is often so solidly packed that it is found advisable to run a harrow or cultivator before seeding. There is very little danger of such soil drifting and the spring cultivation furnishes a good seed bed."

How Much Wheat to Sow.

Theodore Cay, Kinistino, Sask., writes:—"Your correspondent, 'Saskatchewan,' Kinistino, Sask., in the issue of Dec. 5th, asks, 'How much wheat shall we sow per acre, in the Territories?' He speaks of some people always sowing a certain amount because others do. In this district no great attention has been paid to wheat growing so far. Distance from market and lack of competition by buyers in our only market (Prince Albert) has rendered wheat growing only a secondary consideration. We all know that the samples of wheat vary in different seasons. For my part, I get the best results from medium sized grains. This also holds good in my experience with potatoes. By fanning out the extra large grains, and also those of diminutive size, I manage to get a fairly even sample in each successive season. I always bluestone the wheat, and as soon as it is dry sow two bushels per acre on summer fallow and one and a half on stubble. I have tried every quantity from one to two and a quarter bushels per acre, and have found the above amount to give the best results. I use the shoe drill. If a less amount is used on fallow the straw grows too rank, and consequently, the crop is late in ripening. On stubble, thin seeding gives weeds too much of a chance. I know only one instance in which less than one bushel of wheat per acre has been tried in this district. In 1899 one man sowed (by hand) about 50 lbs. per acre. He ploughed it up and resowed it with oats. He laid the blame upon 'the grubs.' The next spring he sowed only one-half bushel per acre, and the result was one of the most elegant crops of lambs-quarter ever grown in the Northwest Territories. This crop never ripened. Again the poor 'grubs' got the blame. Thin seeding may be all very well on certain soils, but on this extra rich clay loam, I think it is a mistake."

Subscriber, South Norfolk, Man.: "I see that our local paper quotes from your Dec. 5th issue, what a man in Saskatchewan has to say about economy in the sowing of grain. I think that that writer and his critic here are both very much at sea. For example, it is stated that a grain of wheat on summer fallow will stool out two or three times

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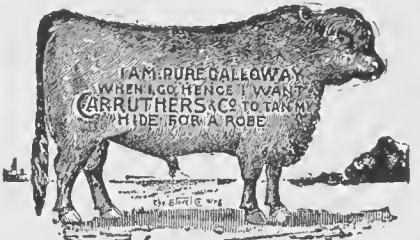
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more than if it were sown on stubble land, and inferentially he contends that the man who sows from a bushel to two bushels of seed on that fallow is throwing it away. If that writer has been any time a farmer he ought long before this to have known that the great trouble, especially in the far Northwest, is to get the grain ripened before frost sets in. Therefore every practical farmer sows more seed to the acre than it actually needs for the express purpose of limiting the tendency to stool, which is greatly encouraged by summer fallowing and thin seeding. The every day practical farmer does not sow from a bushel and a half to nearly two bushels an acre of wheat, merely because it is the custom. Universal experience has shown that it is safer, and therefore much more profitable, to sow a bushel and a quarter or a bushel and a half to the acre on fallow, and thereby promote earlier ripening, than to sow half or three quarters of a bushel, thereby inducing in that rich soil an extent of stooling that will almost certainly result in the whole crop staying green till it is frozen. What is true for the older settled parts of the country is still more certain when we go further northwest. Fifty years ago the thin sowing theory of seedling was started by a London (Eng.) alderman called Mechi, who had made money by selling razors and then started a fancy farm, on which he demonstrated how many pounds of wheat an acre could be saved by his decidedly original methods of wheat planting. But to-day the best English farmers, guided, of course, by experience of all the ways of it, now sow two and a half bushels of wheat and more of oats and barley. That wheat is fall wheat, and if fall wheat succeeds out Edmonton way, it might be pastured both fall and spring, so correcting the tendency of thin seeding to prolong growth, with its almost inevitable consequence of getting frozen before it is half filled. Moreover, the weeds are to be reckoned with. This year's sad experience has shown all of us that a thin stand of grain means a full stand of weeds, while we also know that a good stand of grain chokes annual weeds so as to minimize their injurious growth."

Greenhorn, Shellmouth, Man., on the same subject, says: "My small experience has been to sow one and a half bushels of good clean wheat per acre. I have sown one and a quarter bushels. The latter quantity is all right providing nothing happens, such as birds taking away part of the seed, frost thinning out the young plants, etc. One bushel would do if we were sure of every seed germinating. Last summer a few wheat plants grew in the garden (sown by

accident). I took pains to cultivate around them when working in the garden. Each plant threw out between 50 and 60 shoots (stools you call them, don't you?) Each of these shoots bore a head of wheat between three and four inches long, say 50 heads to each plant of wheat, but they would have required fully three weeks longer to mature than the wheat sown on a half bushels per acre. These odd grains were sown by drill the same time as the wheat crop. You have always advised sowing one and a half bushels per acre, and I think you are right. I might add that I have found it best to use seven pecks for late sown wheat, and on old land."

Breed and Environment.

Ignorance, Okotoks, Alberta: "1. How is it that what some people call the best breed of beef cattle, namely, the Herefords, get smaller in size as they are graded up. At least I know by personal observation among men who have nearly pure-bred animals, that their steers are smaller boned and do not get to the required size, at three years old. Some few years ago I went through a bunch of four hundred head of beef cattle that were fed in an open corral, and without exception every Hereford grade was a picture to look at, for every one was fat. But when it came to the others (mostly Shorthorns) there were lots that were not up to the mark at all. The cattle were picked up around Edmonton, and some had been brought from Manitoba. There was no picking done, so that neither breed had the advantage over the other in that way.

"2. Does the first cross of a Hereford bull respond to feed quicker and better than that of the Shorthorn and other breeds?"

"3. Is it true, as a rule, that Aberdeen Angus are small cattle, and unfit to turn off at three years old? I know one very intelligent breeder that gave them a good trial. He had two of the best bulls ever brought into this country and he informed the writer that his neighbors turned off their Shorthorns at three years old, and he had to keep his Aberdeen Angus till they were four. He has changed to Shorthorn bulls and I understand is more than satisfied. I have been breeding to a Shorthorn bull, but am not satisfied with the result. I want to get harder cattle and also would like to get cattle that breed solid color. I must say that I have a weakness for a bunch of cattle all one color, and I believe I can do that without detrimentally affecting the financial part of the business."

"4. How would the Galloway do? With ordinary care in this country would they mature as early as the Shorthorns? How do

they compare with the Shorthorns, Aberdeen Angus and Herefords, in early maturity, size and hardihood."

Answer.—I. There was once a man, who, when he began to get the right eye of his eyes said "I see men as trees walking." This enquirer is in the same position. The breed is only one-half of the whole case. Environment and adaptation to that environment, feed and care, form the other half. We have seen choice pure-bred Herefords in the very district, from which this enquirer writes. The pasture is very nutritious and it is a matter of general experience that the Hereford beats other breeds when fed only range pasture. It is not for a mere whim that ranchers in the Western States, all the way down to Texas give fancy prices for Hereford bulls. But winter, and occasional spells of semi-starvation, discount the special advantages justly attributed to the Hereford as a grazer. The sappy well fed cow, as seen in October, is pinched by cold and hunger and her calf gets a bad start, is stunted and makes inferior development. Size, combined with early maturity, are the result of good breeding, good feeding and general good environment. Nature adapts herself as far as possible to conditions, and those well graded animals are small because nature can do no more for them with such untoward environments as a severe western winter provides. If those well graded or pure-bred animals had a good bay stack and some shelter provided to meet climatic emergencies, there would be less need to discuss the advantage or disadvantage of grading up with this or any other breed. Read what is said on page 933 in last issue about horse breeding and hardiness. Cattle forced for all they are worth on a sheltered English farm must have puny offspring when turned out to rustle on a western ranch.

There is no reason for setting down every cattle beast covered with red hair or white, or both together, as a Shortborn or even a Shortborn grade. Grade bulls and mongrel cows do not produce grade Shortborns, and whether raised at Edmonton or in Manitoba, it is only the offspring of a pure-bred sire that can properly be called the grade of any breed. Add to uncertain breeding, skim-milk nursing and mean wintering, and you will always have a scrub of some degree.

2. The first cross after any really prepotent bull will always show greater improvement than subsequent ones, if other conditions are equal. In this the first cross of a Hereford is not relatively superior to that of other breeds.

3. Aberdeen Angus are not small cattle, except when they have been stunted by insufficient feed and shelter. They are not as good rustlers as the Herefords, though in suitable conditions they make a splendid carcass of stall fed beef, see on page 421. The Shorthorn, like the Scotchman, will take hold and do well anywhere, and is unbeaten as an all-round variety. Color is a mere fad. "A good horse is never a bad color." A prepotent sire will do more to fix the color of his posterity than any other influence.

4. The Galloway, being the oldest variety, has more prepotency than any other, and is favored by a few western men for the quality of its beef. But it does not mature early under ranching conditions. It is quite hardy, but grows more slowly than either the Shorthorn or Hereford. Study Prof. Shaw's paper in this issue.

Mr. Bedford's Reasons for Favoring Brome.

K. McIver, Roselea Farm, Virden, Man.: "In looking over your issue of 20th ult., I observe a statement, in Mr. Bedford's article, 'The Year's Lessons in Manitoba,' which, in discussing pasture, says: 'Brome grass is unquestionably the best pasture grass for Western Manitoba.' Would Mr. Bedford kindly give his reasons for the above statement, as I am not aware of seeing a test, of which is the best pasture grass, in any of his annual reports? My apology for trespassing on your valuable space is that the grass question is becoming a very live one, and I think it of considerable importance (since Mr. Bedford is a public servant) that he substantiate, or at least give his reasons for thinking Brome the best pasture grass, as quite a few farmers think otherwise."

Answer by S. A. Bedford, Brandon:—"My reasons for stating that Brome grass is superior to Western Rye for pasture is based on the fact that Brome grass starts earlier in the season than Western Rye, and remains green later in the fall, and when eaten off by cattle it grows up much quicker."

The New Dairy Association.

The correspondent to whom D. W. Shunk replied in our Dec. 5th issue returns to the charge thus: "Heigh ho! my masters, but this is a strange world and human nature contains such subtle ingredients that unless

Some power above the giftie gie us To see ourselves as others see us, a man may not know his own motives. Here is one, D. W. Shunk, from somewhere, defying me, in your last issue, to give one instance of his ever having claimed that the instruction he or anyone else gave in the dairy school was worth 5 cents. Defy, mind you! If he had expressed an opinion and passed on, I might retreat with honor, but there he stands, with the chip on his shoulder, and actually defies. Well, here goes.

For over Fifty Years

Mrs. Winslow's Soothing Syrup has been used for over fifty years by millions of mothers for their children while teething, with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for Diarrhoea. It will relieve the poor little sufferer immediately. Sold by Druggists in every part of the world. Twenty-five cents a bottle. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind.

It is much against my will, but there is nothing for it but to oblige him, so I will give him one instance.

"You will observe," he says in his letter, "I was instructor in the dairy school one winter and have had the offer of the position every winter since, but I refused it, as I consider it a farce." This led me naturally to infer that he must have had some correspondence with the Department, and my curiosity was aroused to see in what language this person conveyed to the Department the information that its dairy school instruction was a farce. The records of the dairy school are not state secrets, but are open to the scrutiny of any citizen on his applying in the manner provided, but if he should fail he can always get what he wants by applying to his member of parliament. Well, I find on file, a letter from Mr. Shunk, dated November 29th, 1899, in which these remarks occur, on which I make no further comment except to say that the offer it contained was not accepted:—

"It would give me great pleasure to take charge of the cheese class for you, but for the small salary that has been paid for the work I cannot possibly take hold of it. It is worth \$200 for those two months. I would be willing to assist you the year through for \$900. I could look after, say, all east of the Red River in summer, and take charge of the dairy school in winter.

"It is no slight favor this new Butter and Cheese Makers' Union is asking. Application has already been made to the Government to divest itself of all control of the Dairy Department and to hand over the same with the revenue thereof, amounting to some \$5,000 per annum, to the Union for administration. If their request is complied with, the Union, of course, would not appoint its own members on the staff of three or four paid instructors it purposes to engage. Or, if it did, the members being all just as scrupulous and conscientious as Mr. Shunk, would not for a moment attempt to obtain more remuneration for their instruction than what they honestly believed it to be worth. In any case it is desirable to have all the information about it possible; so I will be glad to bear from Mr. Shunk again, or, if he is done, perhaps some other bona fide director will kindly take the floor.

"It is not true that the bulk of the bad cheese is made by ex-students of the dairy



Calf Branding at Cottonwood Branding Corral.

school. Of all the cheese makers in the French cheese factories east of the Red River, with the exception of the one at La Broquerie, I do not know of one who has been a dairy school student.

"It is not true that the dairy school professes to make cheese or butter makers at its winter sessions, although at these sessions the only thing the student cannot acquire is the behaviour of milk and its products in summer temperatures. One of the regulations is that no maker shall receive a diploma until he has worked two seasons after leaving the school in factories subject to the periodic inspection and instruction of the dairy superintendent or his assistants. In the dairy school, if full advantage is taken of the opportunities it presents by both instructors and students, the latter can acquire the complete theory of butter and cheese making and much valuable practice. They can learn the care of steam engines and boilers, steam fitting, use of mechanics' tools and a knowledge of the construction and operation of cream separators, as well as all other machinery used in creameries and cheese factories. They learn the oil test churn method of paying for cream; milk testing with the Babcock tester, including composite testing, and how to pay for milk in the cheese factory on the fat percentage basis.

"The Government has acted liberally towards the dairy school. The people took to it kindly at first. If it merits half the denunciation the Butter and Cheese Makers' Union is heaping upon it, a great load of condemnation rests on the shoulders of those who were entrusted with the conducting of it. I believe the dairy school is an excellent institution. If it has not done all that it might have done, the fault has been in the management, and that is not an irremediable feature.

"I notice the roll book for last winter shows that 35 students took one or other of the courses, and 11 professional butter and cheese makers, who have previously taken one session have already entered their names for the session commencing this month. This is an indication that those well qualified to judge do not consider the tuition worthless. D. W. Shunk's statements are too sweeping to carry any weight whatever and merely serve to convince the reader of his total want of sincerity."

Albert E. Yeo, Cypress River, Man., Jan. 7, 1900:—"Hard times, but I cannot do without The Nor'-West Farmer."



As it is desired to make this column as interesting and valuable as possible to subscribers, advice is given in answer to questions on legal matters. Enquiries must in all cases be accompanied by the name and address of the subscriber but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and facts stated clearly but briefly set forth.

Answers to Questions.

Grain Weight.

Farmer, Lorile, Assa.: "Kindly let me know if I am obliged to accept the weight given me by the grain-buyer for my grain, when I have had it weighed at the town scales and find the weight three to five bushels more than the buyers gave me credit for. If after taking my loads of grain first to the town scales, and getting the weight from the weigh-master, I should find when I delivered the wheat to the grain-buyer that there was a difference, after deducting from my weight for dirt or dockage, can I compel the buyers to pay for weight as given by the town weigher? If so, what is my best way to go about it to get justice?"


Answer.—This is purely a matter of fact. You are entitled to be paid for the actual amount sold.

Wife's Estate.

Subscriber, Assa.: "1. If a married woman claims or owns some stock before marriage, is her husband obliged to keep and provide for them on his farm without share or charge, when she is living with him? 2. If a father says to his daughter, when only 15 years old, 'This article is yours,' can she claim it from him after she has married?"

Answer.—1. The stock being separate estate, the matter can be dealt with as between strangers. 2. If circumstances point to an actual gift, daughter has a right to the article.

Wm. Stewart & Son, Lucasville, Ont., Jan. 4, 1901:—"I take so many papers I thought I would have to drop some of them, but did not feel I could do without The Nor'-West Farmer, although I live in Ontario."



Riesberry's Pump Works


BRANDON, MAN.

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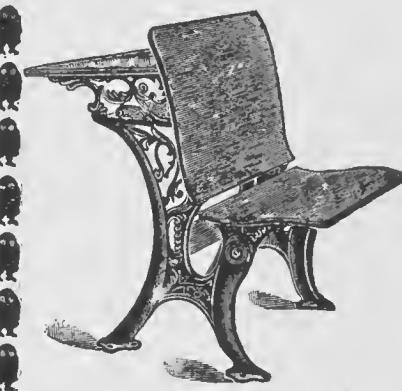
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J. A. Pennell, Macgregor, Man., a new subscriber, Jan. 7, 1901:—"Allow me to say I am more than pleased with The Nor'-West Farmer. It exceeds anything in reading matter I have seen. I would not be without it for twice the small price you ask. It is the most interesting paper for the money I ever read."



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The Nor-West Farmer

ISSUED TWICE A MONTH.

Established 1882.

The only Agricultural Paper printed in Canada between Lake Superior and the Pacific Coast. Issued on the 5th and 20th of each month.

THE STOVEL COMPANY.

Proprietors,

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Winnipeg, Man.

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Transient advertisements, for less than three months, 15c. a line (each insertion). Terms for longer periods on application.

All advertisements estimated on the Nonpareil line—12 lines to an inch. A column contains 150 lines.

Copy for changes in advertisements should be sent in not later than the 27th and 14th of the month to ensure classified location in the next issue. Copy for new advertisements should reach the office by the 30th and 17th of each month.

TO OUR SUBSCRIBERS.

It is the intention of the publishers of this paper to admit into their columns none but reliable advertisers, and we believe that all the advertisements in this paper are from such parties. If subscribers find any of them to be otherwise, we will esteem it a favor if they will advise us, and we will at any time give our personal attention to any complaints which we receive. Always mention this paper when answering advertisements, as advertisers often advertise different things in several papers.

LETTERS

Either on business or editorial matters, should be addressed simply "The Nor-West Farmer, P.O. Box 1310, Winnipeg," and not to any individual.

LOOK AT YOUR SUBSCRIPTION LABEL.

When you pay your subscription, watch the name label on the next two issues which you receive. On the first issue following payment, it might not give the correct date—the type-setting machine may make an error and the proof not be corrected before mailing day. But if the date is not correct on the SECOND issue, please notify us by postal card.

Look at the date label now. Are you in arrears? Are you "paid up" to the end of 1901? The label will tell you. If in arrears, please renew promptly.

Subscribers who miss any of the issues of "The Nor-West Farmer" should drop us a card at once and secure same, as we want every subscriber to get every copy. Do not delay in sending, as our supply of extras sometimes becomes quickly exhausted.

WINNIPEG, JAN. 5, 1901.



TO OUR READERS.

During the past month we have been exceedingly busy, and have found it impossible to keep up with our work in the way which we should have liked. Thus we have been delayed in sending out the premiums which we have been advertising with The Farmer, and some of our subscribers have had to wait. We expect, however, to soon be up with our work again. "Things Worth Knowing" has already gone out to a number of our subscribers, and the rest will be mailed as early in the month as possible. The January issue of The Western Home Monthly will be sent out inside the next two weeks. The four pictures will go out, as advertised, during the year. It would be well to remember that *only those paid in advance* are entitled to these premiums.

THE SEASON FOR THINKING.

The two months yet to come before active preparations need to be made for the work of the coming crop season are about the easiest of the farmer's working year. But, though farming in the field is out of the question in our climate, farming by the stove can be followed with great advantage. A careful review of the work of the past with its disappointments, its blunders and its successes, will be a great help in planning for the layout of not only this year's work, but that of other years to come. If the best energies of the mind are laid out in this direction, it may save many days of work that might lead to very little profit, and prepare us for new and more profitable departures. To forecast the possibilities of improved methods of cultivation, and new departures from hackneyed ways of working, to plan better systems of rotation and their possible influences on the fortunes of the future, is a kind of work to which no one can give too great attention.

One help to this line of action will be the discussions at the various institute meetings, which we are glad to note will be pretty numerous. The papers by local men are often more pertinent to the needs of the district than their neighbors anticipate, and even if you think you know some things better than the man whose name is on the programme for papers, you will lose nothing by being on hand to take a share in what is doing. There is always a chance to learn something new, and if you can give good pointers on any or every subject, the government is always ready to give such men a chance and you may be put on next year's programme as a special lecturer. Whether that is so or not, it will pay you to do a lot of hard thinking before seed time, and if you have anything too good to be kept at home, The Farmer will be only too glad to find room for it.

TWENTIETH CENTURY FARMING.

In the last issue of The Farmer the teachings of experience were ably discussed by four well qualified correspondents. Mr. Mackay confines his review to cropping only, but Messrs. Bedford and Forke go a little wider. Everybody knows that the season was exceptional, but that does not affect nearly the main question that many farmers must sooner or later face, viz., which is the line of farming that is likely to be most profitable in, say the next quarter of a century; and what sort of men are most likely to succeed in that line? Mr. Forke makes two propositions which we think furnish a pretty safe answer to both questions: (1) "Every farmer should have some other source of revenue, besides his wheat crop." (2) "The man who combines science with experience will most surely prosper."

There are great variations in the adaptation of different districts to different lines of farming. In a good many districts stock, principally cattle, have always had considerable attention, mainly because the soil and other conditions were best adapted to that line of enterprise. For all such districts the path of future safety will be found in a careful sifting out of all methods of crop and stock raising that general experience has shown to be unprofitable and the introduction as fast as possible of better methods and stock to replace those we have seen good to discard. On most of the farms so situated, wheat growing cuts only a moderate figure, and only moderate changes in the line of action now followed are likely to be made.

That considerable improvement on this class of farms can and ought to be made as early as possible we strongly believe, but that would not necessitate any radical change. Reform, not revolution, should be the watchword,

and here Mr. Forke's last proposition would fittingly be acted upon.

But there are large areas of the most valuable land in the West whose special adaptation to the raising of good crops of the highest possible grade of wheat has been demonstrated by ten to twenty years of actual test. Let us specify the district tributary to Qu'Appelle, Indian Head and Sinaluta as an example of this very special adaptation. This district has been worked for well up to 20 years by farmers of acknowledged ability, one of whom was selected on account of his great individual fitness to manage the local Experimental Station, and has in actual practice demonstrated the wisdom of the choice that put him there. This district has had a run of seasons exceptionally favorable to wheat growing. Last year saw an exception to this good fortune. But, even in that bad year, the quality of the yield was higher than for any other similar area we know of.

Let us take this special area and try to find how it should be farmed for the next twenty-five years. So far as work along present lines is concerned, we are free to confess that there is not much room for special improvement. They know, and to a considerable extent, practice, the best known methods of wheat growing. So devoted are they to wheat growing that they do not grow enough oats to feed their horses, one reason for this being that it is thought most profitable to grow wheat for sale and buy oats with the money. We also know that the soil has exceptional staying power. By the skilful use of summer-fallowing it is quite possible that this choice land could be made to go on producing wheat for a good many years to come that would give a larger money return than can be got out of any kind of mixed farming.

We have taken this district as an example because it presents the strongest case for all wheat growing that we know of. The question is how long will it be possible, even in this district, with the best skill, to make all wheat growing profitable, taking the aggregate yields and the ultimate value of the land itself into account. The land possesses a goodly amount of mineral plant food laid up by nature as a permanent investment. This mineral matter is slowly soluble, and cannot, by any methods now known to us, be so dissolved as year by year to furnish enough food for the crops we wish to rear upon it. When only one kind of crop is wanted, the difficulty becomes much greater. Science and world-wide experience join in pointing out to us that to produce any kind of crop we must have in the soil humus—i.e., decaying vegetable matter, and local experience has fully demonstrated that every paying wheat crop uses up that humus much faster than nature can restore it. Just now we partially get round the difficulty by summer-fallowing, but the best guides in the practice of summer-fallowing will be most free to admit that this, their best expedient, is only putting off the evil day, and certainly does not help, but rather hinders, the chances of fruitfulness in the years to come.

One good point has already been made. It has been proven, more fully in this very district around Indian Head than anywhere else, that Brome grass, as a rotation crop, supplies some very hopeful material for the bridging over of the difficulty. Besides serving as a check on annual weeds, which are nature's standing protest against all wheat growing, Brome grass roots hold the land so firmly in seed time as to save it to a great extent from being blown away, while the decay of those roots furnishes an amount of humus, in which the fertilizing bacteria that do so much to aid the efforts of the farmer, can work to good advantage. And it is more than probable that it is mainly by the efforts of these bacteria that the mineral constituents of the soil are so dissolved as to become actively available as plant food.

We know that there is nothing so

valuable for the retention of moisture in our soils as this same humus. The retention of the limited rainfall of our dry climate is largely dependent on the presence of humus. The mechanical changes, in the structure of the soil produced by summer-fallowing, no doubt contribute greatly to the desired result of holding moisture in the soil till it is wanted by our crops, but without some amount of humus as well the very best work done by man's mechanical appliances, must necessarily lead to poor results.

With the introduction and free use of Brome grass, a great point in advance will have been gained. But if the area under Brome is to bear any reasonable proportion to the area we want to grow in wheat, we must have some means of consuming it on the land where it is raised, and stock feeding is the most obvious means to that end. Even in the best farmed lands of Great Britain, where every variety of artificial manure is available, the very highest authorities, scientific as well as practical, now agree that the manure from well-fed cattle is the most valuable agent yet known for maintaining the permanent fertility of the soil. Looking all through and all round the case, we are, therefore, driven to the conclusion that to maintain in their highest possible efficiency for wheat production such soils as are now best fitted for that purpose, we must with all convenient speed get into the way of producing in quantity such bulky crops as Brome grass and Indian corn and getting together on the farm that produced these crops the class of stock likely to consume it in such a way as to bring fair profit from the stock itself while providing the class of plant food most suitable for raising good crops of wheat without unduly exhausting the fertility of the soil these crops grow upon.

It may not be an essential part of this plan of blending wheat growing and stock growing that the stock

TALL CORN

doesn't come by accident. A fertile soil and careful cultivation are necessary to produce the towering stems and heavy ears.

Yet the farmer who understands that he can't have a healthy corn crop without feeding and weeding, seems to think that he can have a healthy body without either care or culture. But the body is built up just as the corn is, by the assimilation of the several chemical elements on which vitality depends. And what weeds are to the corn, diseases of the stomach and nutritive systems are to the body; they divert the necessary food supply from the proper channels, and the body becomes lean, sickly and ill-nourished.

The proper digestion and assimilation of food is a primary essential of health. By healing diseases of the stomach and organs of digestion and nutrition, Dr. Pierce's Golden Medical Discovery increases the digestive and assimilative powers, stimulates the action of the blood making glands, and sends to every organ of the body the rich red-corpuscle blood on which physical vigor and vitality depend.

"I took two bottles of Doctor Pierce's Golden Medical Discovery, for stomach trouble," writes Clarence Carnes, Esq., of Taylors-town, Loudoun Co., Va. "It did me so much good that I didn't take any more. I can eat most anything now. I am so well pleased with it I hardly know how to thank you for your kind information. I tried a whole lot of things before I wrote to you. There was a gentleman told me about your medicine, how it had cured his wife. I thought I would try a bottle of it. Am now glad that I did, for I don't know what I would have done if it had not been for Dr. Pierce's Golden Medical Discovery."

Dr. Pierce's Pleasant Pellets regulate the bowels and cure constipation.



should be kept on the same farm all the year round. For many years yet summering on grass land at a distance may be most suitable. But the winter should see enough stock on every such farm to maintain permanent fertility, and the principle once fully established, the details can be introduced in due course and by a process of gradual transition.

The big stock barns all over the country, of which scores of plans find their way into the pages of The Farmer, show that the capable farmers who have built them have already got firm hold of the main point, viz., that stock rearing in some form and permanently successful grain growing must go hand in hand. Every new convert to this faith is one more proof of the growing conviction in the minds of the best men that their continued prosperity in the new century upon which we have entered will be most surely maintained by finding out as fast as possible how best to take and keep hold of good stock.

In the present issue of The Farmer will be found papers bearing very directly on the practical side of stock growing. Professor Shaw's paper is the ripe fruit of many years of careful study, and the subject of "beef-making" is also worthy of thought. At the great wheat growers' convention, held at Fargo, N.D., a year ago, the opinion was strongly held by men who had put their views to years of practical test on a large scale, that by growing Indian corn as stock feed the gap between wheat and stock farming could be most successfully closed. Last year, so bad for grain, produced splendid corn. We noted a good sized lot on the Van Horne farm at Selkirk. "Methods of a Pennsylvania Dutchman," page 778 of our October 5th issue, also throws light on this subject.

—John Nichols, editor of the Grenfell Sun, has the sympathy of all his confreres in Western Canada in the sudden demise of his esteemed wife.

—Have you noticed our offer of \$5.00, made in this issue, for best arrangement of farm buildings? Somebody is going to get that money. Why not you?

—There was a little pink slip in your last number of The Farmer. Did you see it? Not only that, but did you give heed to it? It was talking about subscription renewals. By the way, just turn to your front cover and see how your own subscription stands. You want The Farmer, and it wants you, so perhaps you had better renew at once, if you are not now paid in advance.

—In sending us renewals we would ask subscribers to kindly notify us of any errors in the spelling of names, or in any other way, which may have crept into our mailing list. Accuracy is our motto. In sending corrections, be sure and give the way in which name now appears, together with post office. We would also like each person to state if his subscription is a new one or a renewal.

—The summer fairs are being arranged for all over the province so as to allow of stock that has been fitted for one show being exhibited at others, should the owners see fit. It has been arranged by the Winnipeg directors to hold their show a week later than last year, so as to allow exhibitors more time to put their stock in show shape. The dates are July 29 to Aug. 2. Portage la Prairie, Brandon and some of the local shows will arrange dates to suit.

—From several points come intimations of dissatisfaction with the mean bounties now being paid for the increasing number of wolves. The recent poisoning of a huge timber wolf within a few miles of Winnipeg is one example of the growing boldness of

Waterous Engine Works Co., Ltd.

PLANERS AND MATCHERS

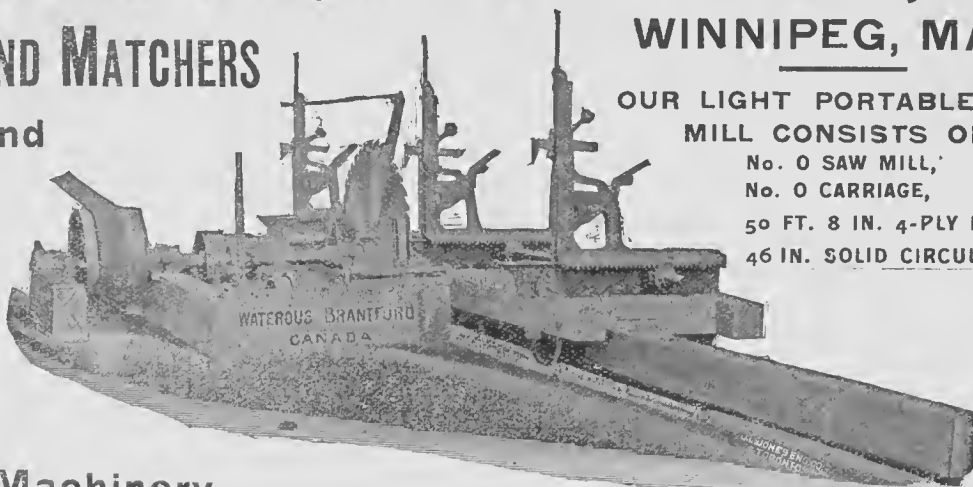
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No. 0 SAW MILL,

No. 0 CARRIAGE,

50 FT. 8 IN. 4-PLY BELT.

46 IN. SOLID CIRCULAR SAW

these plunderers. As will be seen from the latest government bulletin, the sheep stock of the province has last year been reduced from 33,000 to 25,800, mainly for this reason.

—Within the last few days John W. Preston, of Glen Ewen, Assa., and Jas. Baker, of Brandon Hills, Man., has each celebrated his golden wedding. A few days earlier Jas. Barbour, of Balmoral, Man., had a similar celebration. To all the happy couples The Nor'-West Farmer wishes many more days of peaceful happiness in the sunny afternoon of their lives.

—The knack of making the best of one's circumstances is a happy one, but the makeshift business can easily be carried to the extreme. A subscriber in Assiniboia, in renewing his subscription, says:—"One of my neighbors, on being asked by his man for some oil for the mowing machine, told him to put a bit of butter on it when he went home to dinner. I am sorry to say he was not a subscriber to The Nor'-West Farmer."

—We would like to see the young men take hold of our offer of \$5.00 for the best arrangement of farm buildings. It is just such head work as this calls for that brings out whatever talent there is in a young fellow, and teaches him to think for himself. Besides, too, my young man, you will likely have to handle this planning question for yourself one of these days, and you might do well to have your thinking cap on. Look up our offer on another page.

—Our readers will find on another page a letter from Wm. Saunders, Director Dominion Experimental Farms, relating to the free distribution of seed samples. It is not necessary to comment upon the benefits resulting in the past from this generous practice, as we think that nearly every community has seen in some way its advantages in the introduction of good, clean seed. Our farmers who desire to participate in this year's distribution should write at once.

—Eight settlers in the Wolseley district have been brought up at Wolseley by the mounted police, at the instance of the Indian Department, charged with cutting and carrying away wood from the Assiniboine Indian reserve. They were each fined \$1 and costs only, as it was not the intention of the Department to be severe in this case, but simply to make it a warning to others. Any further cases will be dealt with more severely, as the Department is determined to put a stop to this practice.

—The Farmer would be pleased to receive photos suitable for reproduction in its columns. Anyone who has

watched our columns will know pretty nearly what we want—farm scenes, buildings, rural scenery, range pictures, etc. If it is desired that the photos be returned, and the request is made, they will go back to the owners unharmed, whether used or not. Always write the subject on the back of photo, and a letter telling us of your sending it. If we cannot use all received, no harm will be done.

—The second annual meeting of the North West (Canada) Entomological Society will be held on the evening of the 16th inst., in Lacombe, Alta. The past work of the society, and the devising of means for its extension will be discussed. Appointment of officers for the ensuing year will also take place. The president will give an address on the noxious and beneficial insects of the past year. When we remember the annually increasing number of insects with which we have to reckon, some study of entomology certainly is worthy of the best of our farmers.

—Have you read the letter in regard to the testing of seed grain which the Director of Experimental Farms publishes in another column? With the very unfavorable weather of last fall, and the chances for weakened germinating powers in much of our grain, our farmers will do well to send samples to Ottawa for testing. It would be well, however, to remember that one of the greatest dangers lies in the way of the spoiling of damp grain by heating and mustering after warm weather sets in. Damp grain may, thus, show a fairly good percentage of active grains in a winter test and fail when sown on account of the damage from the influences which it has set up within itself. In keeping your seed, be sure it is dry.

—The necessary arrangements are being made for the annual conventions of the various Live Stock and Dairy Associations. The date fixed is the bonspiel week—February 19 to 22. These gatherings will start with the Sheep and Swine Breeders on Tuesday, 19th; Pure-bred Cattle Breeders, 20th; Horse-breeders, 21st; Dairy Association, 22nd, with joint meetings each evening. The following able speakers are expected to take part:—Professor Curtiss, Iowa; Professor Carlyle, Madison, Wisconsin; A. Galbraith, of American Clydesdale Association; Professor Robertson, Professor Grisdale, Professor Day and others. Reduced fares for intending visitors are being arranged for.

—We were in error in our report in our last issue of the International Live Stock Show at Chicago, when we said that D. McRae, of Guelph, with his Galloways, was the only Canadian winner in the ring for breeding cattle. The mistake was inadvertant, and has been

pointed out by a correspondent, who writes:—"The few cattle taken by Canadians were intended chiefly for the sale, more than for show; still they all scored in the show ring, W. C. Edwards & Co., Rockland, and Harry Smith, Hay, Ont., winning in Short-horns, and H. D. Smith, Compton, Que., winning three prizes in the bull classes with Herefords." We are glad our attention has been called to the omission, and we gladly publish this correction.

—We have been pleased to learn from conversation with some of the officers of the Central Experimental Farm, that the annual reports of the several departments at Ottawa, and of the branch farms in the provinces, are now completed and in the hands of the Director, ready for the printer. The Hon. Minister of Agriculture has this year with commendable zeal insisted that these reports should be pushed forward with all possible dispatch, so that they may be ready for distribution in all parts of the Dominion before spring opens, instead of late in summer, as has usually been the case. This will be of great advantage to the farmers of Canada, as they will be able to take advantage of the many valuable suggestions which are every year made in these reports, without having to wait a whole year before they can put into practice anything which may appear to be useful and applicable to their individual circumstances. Many of the readers of The Farmer will no doubt remember our strong appeals, in years gone by, to have this work done earlier; thus we make the above announcement with a good deal of satisfaction.

Something about Sleep.

It has been said that when we feel a constant need of sleep, the decay of the mental faculties has set in, and that when we are growing old we may know we are all right and our powers unimpaired as long as we have the ability to stay awake. It is also declared from the same source that the higher the intellectual rank, the less sleep a man requires, giving as example Goethe and Humboldt, who got along with only two or three hours of sleep a day.

Cases where the health continues with so little sleep are very rare, for it is a well-known fact that every healthy adult requires an average of eight hours sleep out of twenty-four. Of all natural things, sleep is considered the best contributor to a refreshing of the body, to cheerfulness of mind, to nobleness of character and kindness of spirit. Sleep is so needful, that if any deny themselves of it for any reason, it will finally overtake them in spite of themselves. All nature needs rest, and the human family is no exception, but their rest must be an unconscious state, which we call sleep, no other will suffice.

**Wheat.**

On Dec. 24 we reported trade as about normal, with cash wheat at 70c. at Chicago. A week later there was a stir and May wheat went as high as 79c. Yesterday it had dropped to about 76c., but this morning cash wheat stands at 75c. and May at 78c. On the home market quotations are only nominal. Fort William one hard is about 81c. At the Ogilvie elevator, Winnipeg, the little trade doing is mainly about 3 hard quality. They quote for 1 hard, 64c.; 2 hard, 62c.; 3 hard, 59c.; and tough 3 hard, 53c. The Lake of the Woods elevator give about 62c. as their going figure in the city.

Oats.

Oats have changed very little. Home oats at Winnipeg are 34c. to 35c. From Edmonton they go higher, 36c. to 38c. Some very good seed oats from Edmonton are offering by retail at 40c., but must be looked after for a stray foul seed.

Barley.

Next to nothing offering. About 36c. is the value for ordinary samples.

Flour and Feed.

There is a little talk of a slight possible rise in flour, but sales are still made at the old figures. Ogilvie's Hungarian, \$2.10; Glenora, \$1.95; Manitoba, \$1.60. Bran and shorts are up \$1. They are now \$14 and \$16 sacked. Inspections in Winnipeg district for week ending Jan. 7th were:—1 hard, 3 cars; 2 hard, 13; 3 hard, 53; no grade, 72; other grades, 5. Total, 147 cars. Of oats, 8 cars, and of barley, 2 cars were also graded.

Butter and Cheese.

Butter.—Creamery butter is now all off the market, but there is a larger output of dairy this winter than ever before. Of strictly first-class less is offered than is called for, the going figure for this quality is 16c. to 17c. For ordinary the price at Winnipeg is 12c. to 14c., according to quality, with not much prospect of improvement on these figures, as the supply is greater than the demand.

Cheese.—There is still a quantity of large cheeses on hand and some from the country also on offer, 8 to 8½ cents being the going price at Winnipeg. California cheese is being rushed on the coast markets, which keeps down the figures made for our Manitoba make.

Live Stock.

The business in all lines of live stock is very quiet. Dairy cows are not meeting such a demand as has been the case in former years at this season. Milk in the city is quite plentiful and much more is offered at the dairy school than they require for its purposes.

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BARLEY WANTED.

WE STILL REQUIRE A FEW THOUSAND BUSHELS MORE OF GOOD BREWING BARLEY. FARMERS WILL DO WELL TO FORWARD US SAMPLES.

EDW. L. DREWRY
Redwood Factories,
WINNIPEG, - MANITOBA.

Winnipeg Grain Exchange.

The thirteenth annual meeting of this association was held on Jan. 9th. The president, Mr. Wm. Martin, in his retiring address, reviewed the history and work of the institution. In the early years of the society Toronto ruled the roost. During the first year no standards were adopted because those recommended by the western men did not meet with the approval of the Toronto contingent. The west now knows enough of its own business, without calling for outside help in such matters.

The crop area for the last season was much larger than in 1887, the first year of the society's existence, but the yield is a sad contrast to the output of that banner season. In 1887 we had from 432,134 acres of wheat a yield of 12,350,000 bushels, an average that has perhaps never been equalled on this continent. Twice since then we have had choice crop seasons, but this last year's outcome from Manitoba was not greatly in excess of that of 1887, though the area in crop was 1,800,000 acres. There ought to be in Manitoba and the Territories 2,400,000 acres under wheat in the coming year, and from that it may be possible to gather a 50,000,000 bushel crop.

The improved transport service is well worth noting. In the early days a 20,000 bus. cargo from Fort William was about the standard, now a steamer can load up 250,000 at one cargo. Buffalo and New York are no longer dominant shipping points. The rapid improvement of the all-Canadian routes is a pleasing feature. This question of transportation will continue to be a leading one for years to come.

The result of the much talked of Grain Commission has been to embody many things in the statute that every expert felt must come. While some of the provisions of the act bear somewhat severely on the trade, grain dealers generally have accepted the situation and have endeavored loyally to work in strict accord with both the letter and the spirit of the law. For the first time they have a tribunal to appeal to, where they may have vicious and ignorant charges of dishonesty and ill-treatment investigated by an impartial government official sworn to properly perform his duty without fear or favor.

I trust the recommendation of the Grain Standards Board in favor of a reduction in the number of grades will meet the approval of the government. The change from Fort William to Winnipeg as an inspection centre has proved very satisfactory to the trade. A further improvement would be to make Winnipeg an order point or terminal division in the handling of our wheat. This would be the means of opening a sample market here the same as that of Minneapolis, and be of advantage to the trade.

The crop, though much of it badly damaged, still makes a satisfactory sample of flour, which is well able to maintain our reputation in that regard. Railroad extension is still keeping pace with the requirements of the country. Where twenty years ago there was only one line of railroad, we have now a network of railroads owned by three competing companies. I hope farmers will all be specially careful in the selection of their seed for the coming season's crop and do their full share to maintain our past record. The reputation of Manitoba hard wheat as the best in the world, is so great that other provinces and other countries are now attempting to get a supply by cheaper methods than buying from the original producer. Ontario and British Columbia have both tried to meet the demand for Manitoba red Fyfe wheat by growing it themselves, and now I see that the farmers of New South Wales have been following the same lead. They may take the seed, but they cannot take the soil and the climate. Manitoba and the Northwest stand alone in their monopoly of the production of this king of cereals.

The high price of flax may lead to a considerable extension of the area devoted to that crop. I think farmers might give greater attention to barley than they do. For the production of oats we have long looked to the territory of the M. & N.W. railway, but the new settlements in the Edmonton district bid fair to become the finest oat producers of the Northwest, while the quality is something never before attained anywhere in Canada.

It is a question of great importance to farmers in Manitoba to obtain a change of seed oats if they are to continue to grow this crop successfully, and nowhere can better oats be got than from the district just mentioned.

Seeing what has been done in the last 20 years, it is in order to recall the belief so frequently expressed by the late Consul Taylor, that the great wheat-growing area of the Northwest may yet be north of the 49th parallel.

Mr. Martin closed his able address, of which the foregoing is only an epitome, by paying a tribute to the memory of W. W. Ogilvie, Stephen Nairn and D. C. McBean, each a well-known figure in the grain trade of the west, while that of Mr. Ogilvie was a household word all over the Dominion. The following officers were then re-elected by acclamation:—President, Wm. Martin; vice-president, C. A. Young; secretary and treasurer, C. N. Bell.

Come all you farmers of Manitoba and the Northwest, Subscribe for The Nor'-West Farmer, for it is the best. You can't a dollar to better advantage invest. By encouraging the publishers of The Nor'-West Farmer, Issued twice a month at Winnipeg, the capital of the West.

—Jas. A. Pennell, Macgregor, Man.

Jan. 7, 1901.

BOLE'S COUGH CURE CURES COUGHS.



In this department we publish as full a list of the impounded, lost and estray stock of Western Canada as is available. Notice in one issue, not exceeding five lines of lost or estray stock is given free to any of our subscribers who forward information. Notices exceeding above mentioned length will be chargeable at the rate of 10 cents per line on all overplus matter. The list of impounded stock is compiled from reliable sources.

By LOST stock is meant stock that has been lost and the owner advertises to find them.

By ESTRAY stock is meant stock that has wandered on to a person's place, or into his band, and are advertised to find the owner. Write the letters of all brands very plainly. Display notice in black-faced type will be given for \$1 (which must be enclosed with the order), such notice not to exceed 40 words.

Impounded.

Headingley, Man.—One light grey mare with dark points, about 7 years old, no brand or marks visible. John W. Talt.

Cook's Creek, Man.—Roan steer, well bred, some white marks on back, white on forehead and tail, piece cut out of right ear, about 18 months old.—Wm. Henderson.

Orange Ridge, Man.—One black heifer, rising 2 years old. Henry Bowe.

Reston, Man.—Two large black pigs.—Alex. Wilson.

Rosser, Man.—One brown pony, mare, blind in right eye; one bay horse, about 4 years old, branded on right side opposite stifle joint.—Duncan McDonald.

St. Laurent, Man.—One heifer, color red and white, 2 years old, no mark or brand. Elzcar Boyer, Lot 24.

St. Norbert, Man.—One mare, brown, with white spot on forehead, two hind legs white, branded 111 on right shoulder, about 10 years old; one pony colt, about 20 months old, white spot on forehead and on left foot; one horse, color grey brown, branded 111, about 10 years old. Paul Ross.

Lost.

Alameda, Assa.—Bay horse, age about 12 years, weight about 1,100 lbs. Lost since Nov. 9th.—E. Warriner.

Aldina, Sask.—Bay mare, branded K on right hip, last seen around Moosomin's reserve. Reward.—A. E. Dunn.

Arden, Man.—Nine young cattle, some of them branded O on left shoulder. Reward.—Dan Hamilton.

Bale St. Paul, Man.—One buckskin mare, 3 years old, with dark mane, tail and legs; heavy set, no brand. Suitable reward.—H. L. Ross.

Belcourt, Man.—One red bull calf, stripe of white across forehead.—E. E. England.

Elgin, Man.—One bay mare, low set, with two white hind feet and star on forehead.—A. Maguire.

Foxton, Man.—Three young cattle rising 2 year old; one pure white, two of reddish color, all stamped "A" on right hip. Two dollars a head reward.—Arch. Wood.

Glen Adelaide, Assa.—One 2-year-old black filly, with heart-shaped brand on hip; one bay mare, 3 years old, branded with heart; one black mare, 5 or 6 years old, branded; also a little colt with the black mare. \$10 reward. Ebenezer Coult.

Indian Head, Assa.—Pinto gelding, 5 years old, and pinto mare, 4 years old, each branded R. M. B. on left shoulder, weight about 1,100 lbs. each. Lost in May, 1898. \$20 reward to any one giving information that will lead to their recovery.—R. M. Bailey.

Kutawa, Assa.—From Touchwood Hills, four cows (may have calves) and one steer, branded 6 on right shoulder. Information leading to finding the same may be sent to L. MacLeod, Kutawa; or R. Sinton, Regina.

Minnedosa, Man.—From north of Minnedosa, a dark brown gelding, 5 years old, white stripe on face, small brand on left hip. Reward.—Wm. Reid.

Minnedosa, Man.—One bay mare colt, white star on forehead, two white hind feet; last seen about three weeks ago north of Strathclair. Any person giving information that will lead to their recovery will be suitably rewarded.—David Curwen. Rolling River P.O. (Minnedosa district), Man.

Oak Bluff, Man.—Yearling horse colt, brownish black, white spot on forehead, scar on left hock and lump between knee and fetlock on left front leg.—John Findlay.

Regina, Assa.—Dark brown mare, 5 years old, and one bay colt gelding, 2 years old, has white hind feet. Both are branded 1 K on left shoulder. \$5 reward.—Henry Brain.

Souris, Man.—Nine-year-old black driving mare, weighing about 1,200 pounds, has a dish face and small star, had on a single harness and string of bells, no bridle nor halter. Reward.—John Sharman, 25, 7, 22, Souris.

Tamarisk, Man.—Spotted red and white hulk calf, coming one year; one red heifer calf, with white spot across hips, coming one year.—Wm. Fennell.

Whitewood, Assa.—Aged bay horse with large front knee; and dark grey mare, general purpose, aged 6 years.—Russell Branton, 31, 16, 2w.

Estray.

Dauphin, Man.—Three spring calves.—M. C. Lee.

Prince Albert, Sask.—One small red cow, branded 2PK.—James Baird.

Gilbert Plains, Man.—One red steer, with white star on forehead, 1 year old last spring.—Chas. Sanders.

Arden, Man.—One bay horse colt, about 3

years old, very wild, with indistinct brand on left shoulder. Has halter on with rope around neck tied to halter.—Hugh Stewart.

Prince Albert, Sask.—Red and white year-old bull and a mixed grey and brindle year-old heifer, indistinct brand on right hip.—Peter Robertson.

Halstead, Man.—Two 1-year-old steers; one roan and one light red, with white on belly; and a small 2-year-old, white and brindle heifer.—J. A. DeWitt.

Prince Albert, Sask.—One dark red yearling bull, branded T on right shoulder, ends of ears slightly frozen.—R. J. Sutherland (Royal District).

Prince Albert, Sask.—Two cows; one light yellow, large horns, points cut off, no visible brand; the other red and white color, one horn broken and the other bent over eye, no brand.—Jas. Gillett (The Creek).

Island Lake, Sask.—One red and white steer, about two years old, no visible brand; one red and white yearling heifer, branded R on right shoulder.—J. C. McKenzie.

Mandan, Man.—Bay broncho mare, white spot on face, about 6 or 7 years old, wild; indistinct small brand on left shoulder.—Communicate with James H. Parker.

Olds, Alberta.—One yearling colt, sorrel, with two white hind feet, no brand. \$5 reward.—F. Shackleton.

Puckahn, Sask.—One red steer, two years old, branded Y9N on left ribs, BB on right shoulder, one ear short, hob tail. Reward.—B. Brewster.

Stonewall, Man.—One light red calf, white belly, roan on tail and on face.—Wm. Stewart.

Treherne, Man.—Two spring calves, one heifer and one steer, both spotted red and white.—John Hird.

Willoughby, Sask.—One red and white cow, about 3 years old, and one white cow, about 3 years old, both indistinctly branded on left hip, brand resembling JI.—Norman McCauley.

LOST.

On June 28th, 1900, one steel grey horse, six years old, 15½ hands, branded united 7U on left shoulder. \$50.00 reward for information leading to recovery.

J. P. BERNIER, St. Claude, Man.

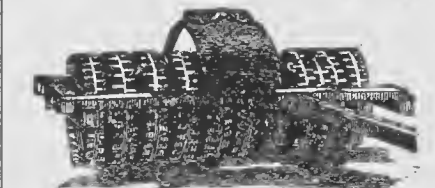
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WRITE STOTT & JURY, Bowmanville, Ont., for full particulars of a painless method of curing Cancers and Tumors.

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THE McCORMICK SOIL PULVERIZER AND COMPRESS FIELD ROLLER.

It crushes and grinds all clods, packs the soil without matting a smooth, hard surface, hence it is not blown away with wind, or washed off with rain; no parts to wear or get out of repair.

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PORTAGE LA PRAIRIE, MAN.

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We handle the widely known McCORMICK ROLLER. The Rock Island Plows, Disc Harrows, Potato Diggers, etc. Also Wagons, Feed Cutters, Grain Crushers.

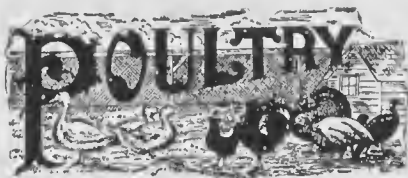
Watson's Pneumatic Feed Elevator saves time and labor, and thus saves money. THE BEST IS THE CHEAPEST.

SPECIALISTS

This is the day of Specialists, and we are Specialists in repairing. If your watch has not been giving satisfaction, send it to us, and we will guarantee satisfaction. Don't delay, as that often means ruin to a watch's delicate organization. We guarantee work for one year, and we will pay charge for carriage one way.

Andrew Co.

WATCHMAKERS AND JEWELLERS,
McIntyre Block, - WINNIPEG.



Poultry Addresses at Guelph.

The annual poultry show of the Ontario Poultry Association, which will be held now permanently at Guelph, in connection with the Winter Show, was of great success, but not the least interesting part of the show were the excellent addresses and illustrations given on poultry topics during the week. R. Graham, poultry manager at the O. A. C., spoke on "Poultry Feeding and Fattening." He showed that the cramming system is favorable to fattening for the first two weeks; after that there is a danger of enlargement of the liver and harm is done to the bird. He showed the weight of a fowl when put in the crates, its weight after being fed from a V-shaped trough for two weeks, the amount of food consumed, the gain in weight during two weeks' feeding, the cost per pound of gain, the amount of gain from ten days' cramming, the total gain with three weeks' feeding, and the cost per pound of gain when finished. The aim of the breeder should be to produce fowls that are plump and white in flesh, with white legs, because these command much higher prices and find a quicker sale than the colored ones, all those having yellow or black legs. Several tests made by him in shipment to the Wm. Davies Company, Toronto, showed pretty conclusively that a well bred bird crammed, brought the highest figure and gave the best satisfaction to both dealer and customer as a table bird. Mr. Graham spoke from the customer's standpoint as well as from that of the producer. He was equal to the questions fired at him from all parts of the audience.

F. C. Hare, who has charge of the work in connection with poultry fattening under Professor Robertson, spoke on "The Fattening of Poultry." He considered fattening chickens and preparing them for market the most important branch of commercial poultry culture. It was of little practical use to instruct the farmer how to hatch and rear a large number of chickens, if, when they were raised, he was at a loss to know what to do with them. On our own market, and more so on the British market, the well fattened chicken was greatly preferred to one not fattened.

The fattening of poultry improved the quality of the flesh, increased the quantity of flesh, with very little gain in weight of bone. At the fattening stations there were sometimes a few birds not shipped to England, and these were sold locally to the best advantage. Without exception these fatted chickens had created a very favorable impression. The food mixture of ground oats and skim milk, he continued, gave a very white, firm flesh. The tallow added during the last ten days of the feeding rendered the flesh more juicy, whilst the placing of fowls in crates prevented exercise and so softened the muscles. The flesh of a fatted chicken, he said, was firm, tender and juicy, containing nothing of an oily nature. It was very poor policy on the part of the farmer to place a thin chicken on the market, and also poor policy for the buyer to purchase such a chicken.

The object of the government poultry fattening stations was to show the farmers that chickens could be fattened at a very low cost per pound gain, how they were killed, dressed and packed for the British market, and the actual cost and expenses connected with this fattening industry. He said that any farmer could make a few fattening crates and fatten his own chickens for market or export. The crates could be placed in any suitable place, and the cost of feed per pound gain in weight would be from four to five and one-

half cents. Mr. Hare claimed that it would pay every farmer or poultryman to fatten his chickens for at least two weeks before disposing of them.

He next took up the work connected with the different fattening stations, and showed how much the chickens had gained at each station and also the cost per pound of gain. At Whitby, Ont., experiments were conducted with different heights of fattening crates, some 16 inches high, others 19 inches high and two 30 inches high. The chickens showed more gain in the two high crates than in the lower crates. At Bondville, Que., the Department found by experiment that chickens fatted more cheaply in crates than in ground pens, and also made more gain on a ration of meal and skim milk than when fed on the same meal, water and cut up mangels. The pullets fed on the meal, water and mangel mixture commenced to lay, showing that this ration was a suitable one for laying pullets. He said a case of a pullet laying had never been heard of when the chickens were fed meal and skim milk.

The Department of Agriculture operated poultry fattening stations this year at Chatham and Whitby, in Ontario, Bondville, Que., Sussex and Andover in New Brunswick, Truro, N.S., and Charlottetown, Alberton, Mount Stewart and Eldon in Prince Edward Island. These stations were intended to stimulate private enterprise in fattening poultry. The stations were moved around to different localities, and were doing a great work in improving the quality of table poultry.

The government, Mr. Hare continued, was quite willing to aid any private individual to secure for his poultry as favorable entrance into the British market as for the poultry from the Canadian stations. Mr. Grindley, who is now in Liverpool as the representative of the Department of Agriculture, handled the output of several private poultrymen last month, saw that it reached the best market, and that returns were promptly made to Canada. The extension and enlargement of the poultry fattening stations was under consideration. Talks during the winter would be delivered at the fattening stations on the hatching, rearing and fattening of the chickens for next year's operations, so that each of these stations would be a centre of modern poultry culture, distributing to those interested the most practical and advanced information regarding each and every department of this important poultry industry.

Local Poultry Association at Stonewall.

At a meeting held in Stonewall on December 29th a local poultry association was organized. It has been called the Rockwood Poultry Association, and the officers elected are: Hon. Pres., Isaac Riley, M. P. P.; Pres., H. C. McQuarrie; 1st Vice-Pres., Jacob Scott, J. P.; 2nd Vice-Pres., R. Sinclair; Sec.-Treas., John Stratton; Directors, Arch. Woods for Dundas, James Clark for Greenwood, Mr. Lund for Victoria, Wm. Hand for Brant, Geo. Clark for Rockwood, Jas. F. McCulloch.

The president, two vice-presidents and secretary-treasurer were appointed a committee on constitution and by-laws. It was agreed to hold an open meeting at an early date and arrange for speakers to come from Winnipeg. It is also expected that papers will be read by a number of the members on "The Care and Management of Poultry."

The annual meeting of the Brandon branch of the Manitoba Poultry Association was held on the evening of Wednesday, January 2nd, when the following officers were elected: Hon. Pres., Dr. McInnis, M. P. P.; Pres., W. Anderson; Vice-Pres., A. E. Sheather; Treas., J. A. Cummings; Sec., D. Sherri; Executive Committee, H. Walker, I. Knowlton, J. P. Brisbin.

NORWOOD BRIDGE POULTRY YARDS

HEADQUARTERS FOR THOROUGHBREDS

POULTRY.

White Wyandottes
White Plymouth Rocks.
Houdans. Mamouth
Bronze Turkeys.
Pekin Ducks.
Fancy Pigeons.

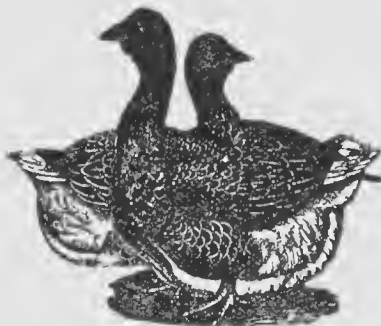
I have some good young and old stock of all varieties for sale.

J. WILDING
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OAK GROVE POULTRY YARDS

LOUISE BRIDGE P.O.
WINNIPEG, MAN.



I have 25 pair of

White Chinese Geese FOR SALE.

From \$5 to \$10 per pair. They are the Leghorn Goose, my old imported goose having laid over 100 eggs this season. Also a few pair of Toulouse, Brown Chinese and Embden Geese, and Mid-winter's noted strain of half-wild Bronze Turkeys, few pair left; Barred Rocks, Javas, Brahmas, S. L. Wyandottes, Houdans, Minorcas, R. C. Brown Leghorns, B. B. R. and S. D. Bantams. See my exhibit at Brandon Poultry Exhibition in January, 1901. Write for circular. I am sole agent for Manitoba and N. W. T. for Geo. Hrtel & Co.'s Victor Incubators and Brooders, Mann's Bone Cutters, Green-cut Bone and other poultry supplies. Address—

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THE EIGHTH ANNUAL

POULTRY

AND

PET STOCK

EXHIBITION

Will be held in

BRANDON, MAN.

JAN. 29, 30, 31 and FEB. 1, 1901.

For prize lists, etc., apply to the Secretary,

Box 270. Brandon. Man.

As I am going to breed Plymouth Rocks, I wish to dispose of all of my prize-winning LIGHT BRAHMAS, LANGSHANS and PARTRIDGE COCHINS. I will sell reasonable or trade for B. P. Rocks. My stock is first-class and must have the same in exchange. My birds are prize-winners and too well known to need any comment. In the future I intend breeding B. P. Rocks, African Bantams and Seabright Bantams. I have now a litter of pedigreed COLLIE and FOX TERRIER PUPS for sale.

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Choice young stock in B. P. ROCKS. My B. P. ROCKS won all firsts and specials at Brandon's Big Fair. Also bargains in S. L. Wyandottes, S. C. R. Leghorns and Black Hamburgs, if sold at once.

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Barred Rocks half price, also thoroughbred Shorthorn Bull Calf for sale—a snap!

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Miami, Man.

Preparing Birds for Exhibition.

Paper Read by George Wood, Louise Bridge, at the Annual Meeting of the Winnipeg Poultry Association, January 7th, 1901.

The first thing to consider is: Are your birds exhibition specimens? Do they come up to standard requirements? If they do, select those you wish to exhibit. Always prepare an extra bird or two, so that if anything happens to one, you have the others to fall back upon. Having selected the birds you intend to show, look them over, remove all broken feathers, which will be replaced by new ones. This must be done at least two months before you wish to exhibit. To prevent broken plumage, keep the male birds away from the hens you intend to show. You must now give them extra care and feed by a liberal allowance of cut bone, cooked lean meat, boiled rice, bread soaked in milk and squeezed dry, also table scraps and corn at night. If your birds are specimens which come under the weight clause, and they are under standard weight, you must feed to get them up to standard requirements, or lose two points for every pound they are below standard weight. Handle your birds every day for a week before showing, so that they will become tame and show off to the best advantage in the exhibition coop. I have seen birds that would crutch down in the coop and get in all manner of shapes, causing a cut of one or two points for symmetry, which might have been saved had the exhibitor handled his birds previous to the show. In preparing parti-colored or black birds, the exhibitor has very little to do besides feeding properly and handling till the day before exhibiting, when he must wash their legs well with soap and warm water, using a small brush to clean the dirt out well from around the scales. After washing, dry well, and oil with salad oil. The combs, wattles and face must be washed, then rubbed over with alcohol and water (one part of alcohol to two parts of water). White birds are more difficult to prepare for show than parti-colored birds, for they must have a thorough washing from head to toes, which is no small task, especially when the exhibitor has any great number to prepare. The proper process for washing birds is this: Take three wash tubs. Half-fill the first one with warm soft water, in which to wash the birds. The next one fill half-full of lukewarm water to rinse the birds in, and the third one fill with cold water. Blue this water the same as you would for clothes. This last tub of cold blue-water closes the pores of the skin and prevents the birds from taking cold. Having the water ready, take the bird and dip him right under the water two or three times, so as to soak him well. Then let him stand on the bottom of the tub, holding his legs with one hand and with the other take white castile soap, and soap and wash well all over. Do not be afraid of rubbing. It requires lots of elbow-grease, and you need not be afraid of breaking the plumage. Clean legs well with a small brush. When thoroughly washed, plunge bird into the rinsing tub; rinse well or the feathers will be all matted together. Now plunge bird into blue-water, dipping him under two or three times to get him thoroughly blue. The washing being completed, you must have a clean coop to put the bird into, well littered with chaff or cut straw. To dry the birds, you must have a very warm room, about 90 degrees, so that the birds will spread out their wings, causing them to dry much quicker. After they are dry, go over their legs and combs the same as I stated for parti-colored birds.

In closing this paper, I might say, put your birds on exhibition in the pink of condition. Then, if they are not successful in winning the coveted prize, they will at least be a credit to you.

Annual Meeting of Winnipeg Poultry Association.

The Winnipeg Poultry Association held its first annual meeting on the evening of January 7th in the office of The Nor-West Farmer. The chair was occupied by the president, George Wood, and there was a very good attendance.

The secretary-treasurer, George Harcourt, presented a very satisfactory report, showing that the association had had an increase of ten members since its organization last March.

A committee was appointed to interview the express companies with regard to rates for transportation of show birds to the Brandon show at the end of January. It is hoped by that means to enable the Winnipeg men to get a large representation of birds at that exhibition. The committee is composed of Messrs. Wood (president), Costello, Reid and Rutherford.

The election of officers was then proceeded with, resulting as follows: Hon. Pres., Lt.-Gov. McMillan; Pres., Geo. Wood, re-elected; Vice-Pres., W. Rutherford, re-elected; Sec.-Treas., George Harcourt, re-elected; Executive Committee, Messrs. T. Reid, J. Aldritt, J. H. Dawson, S. B. Blackhall, C. H. Wise and J. E. Costello.

Success with poultry depends altogether upon the man or woman who undertakes it. The papers and books only assist those who have sense enough to apply what they have read and to know what is practical.

By experiment in the New York experiment station it has been demonstrated that the use of salt at the rate of one ounce to 100 hens each day is beneficial, and at the trials the hens that were fed salt produced more eggs than those that were fed without salting their feed.

The Farmer is in receipt of the prize list of the Manitoba Poultry and Pet Stock Association, which will hold its eighth annual show at Brandon on the three last days of January and the first day of February. Entries will close on Saturday, January 26th, and should be made with D. Sheriff, Secretary, Box 270, Brandon.

It is a curious fact, says the Fancier's Gazette, that an idea prevails among many poultry keepers that it is a necessity to have a cockerel to mate with hens, and that a cock is not nearly so desirable. This is a very erroneous idea, for a cock is not really in his prime until two years old, and many are quite fit for stock purposes until four years old. A mature cock will always produce finer chickens than an immature cockerel, yet most fanciers are always ready to pay a higher price for a young bird than for a cock.

A hen is more productive in proportion to her size than any animal on the farm. The average well-fed hen will lay from 100 to 150 eggs in a year, each one of which will weigh two ounces or more, thus yielding in solid matter four times her own weight in the twelve months. At the same rate of product, a cow would yield two tons of cheese or butter in the same year, and this comparison shows conspicuously the relative superiority of the hen over the more valued cow. Moreover, in addition to her contribution of eggs, she will rear a brood of ten or twelve chicks, and care for them until they are able to look after themselves, while the cow rears but one duplicate of herself yearly. If the hen fails in doing this it is for want of her owner's care, and from thorough mismanagement, which diverts success from her own well-meant and motherly care.

Nearly two-thirds of the letters carried by the world's postal services are written, sent to, and read by English-speaking people.

Freezing of Lake Winnipeg.

The following table is taken from a memorandum kept by a thoroughly reliable farmer, from the time he first settled on the lake shore. It should here be stated that by the expression "frozen over" is meant, that as far as the observer can see the lake is actually frozen over, but no guarantee can be given that the entire lake is so frozen. It might also be said that the ice often breaks up after the lake freezes over for the first time, and remains open for a week or longer. According to this gentleman's memorandum, the lake has been frozen over for the first times on dates as follows:

1877.....Nov. 19	1887.....Nov. 18
1878.....Dec. 5	1888.....Nov. 22
1879.....Nov. 25	1889.....Nov. 30
1880.....Nov. 16	1890.....Dec. 2
1881.....Nov. 15	1891.....Nov. 15
1882.....Nov. 24	1892.....Nov. 19
1883.....Nov. 20	1893.....Nov. 18
1884.....Nov. 20	1894.....Nov. 20
1885.....Nov. 30	1895.....Nov. 20
1886.....Nov. 18	1896.....Nov. 15
	1897.....Nov. 17

To Thaw Out a Pump.

Some of these days the pump may get frozen. If it is an iron one, tie a rag moistened with kerosene round it just a little bit below the spout and set fire to it. If it is wooden, an old blanket soaked in boiling water will do the job, but much more slowly, as the wood is a very bad conductor of heat. Just for that very reason that same old blanket wrapped round it dry will do much to keep the frost out of a wooden pump. Prevention is better than cure.

It was on a down-town car. The stout Teuton woman with the little boy handed a conductor a \$2 bill. "Smallest you have?" enquired the conductor, as he shifted the silver and nickels in his pocket. She thought he meant the little boy. "Nein!" she responded. "I haf one home only three months old aletty." Then the laugh was on the conductor.

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To attend the
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G. W. DONALD, Secretary.

G. H. GRUNDY VIRDEN MAN.

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BARRED ROCKS, S. L. WYANDOTTES,
B. R. GAME BANTAMS.

20 YEARLING BREEDERS AT \$2 EACH.
Satisfaction guaranteed or money back.

I will sell my prize-winning Silver Laced Wyandottes. They won 4 firsts, 3 seconds, and 1 third within the year, competing against the best birds in the country. Will also sell all my White Rocks a few Minorca females and a large number of Barred Plymouth Rocks. A few show birds of each kind for sale. These birds are all bred from the best blood that money could buy. My reason for selling is that I will breed Barred Plymouth Rocks in the future. Eggs \$2 per 13.

A. J. CARTER, Box 90, Brandon, Man.

THE PROFITABLE HEN

is the one that will lay both winter and summer. Green Cut Bone will make her do it. It has been found by actual experience to double the eggs in every instance where used. The **ADAM CUTTER** cuts bone in the most satisfactory way. Leaves the bone in fine shavings easily consumed by chicks or mature fowls. Can't be choked by bone, meat or gristle. Cleans itself. Turns easiest because it is the only cutter made with ball bearings. Several sizes for hand and power. Catalogue No. free. **W. J. Adam, Joliet, Ill.**

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Have Perfected a New Method of Treatment that does away with Operations.

For a considerable time specialists have been devoting their thought and energy to perfecting a new system of treatment for cancers and tumors, which would destroy the cancer germs and cure the disease without the necessity of resorting to an operation. Their labors have been crowned with marvelous success, for the new constitutional remedy which they have given to the world, has been thoroughly tested in hundreds of cases, and has done all that is claimed for it, even making complete cures in cases where operations have utterly failed. There is nothing in the remedy that would harm the system of the most delicate, as it is a purely vegetable compound. It can be taken in the quiet of the home, and as it penetrates the system, it neutralises and destroys these virulent cancer poisons which are eating out the life. Messrs Stott & Jury, Bowmanville, Ont., will be pleased to send full particulars of this treatment on receipt of 2 stamps.

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If you want a MILL, be sure and get the one that has gained a reputation by general use, which insures you against making a mistake.

A full line of repairs always on hand at Brandon.

M. CAMPBELL FANNING MILL CO. LD., CHATHAM, ONT.

For further information, write—

Wm. Atwell, Western Manager, Brandon, Man.

The usual three men were talking over their nationality and saying what they would like to be were they not born of the countries they belonged to. The Englishman said if not English he would be a German. The Frenchman averred that if not French he would be an Italian. Says Pat, "And if I weren't an Irishman, begor, I'd be ashamed of myself."



December Crop Bulletin.

The last crop bulletin of the year 1900, issued by the Manitoba Department of Agriculture, shows a much better yield than was hoped for in the August bulletin. In that bulletin it was estimated that the yield would only average about 7.5 bushels per acre on the acreage not plowed down, or a yield of 6.05 bushels per acre on the acreage sown, which was 1,806,235 acres. The returns after harvest show an average yield of 8.9 bushels. The following is a summary of the returns and they show conclusively that it is an "off" year for Manitoba farmers.

WHEAT.

In many cases the best crops were the late sown ones. Early cut ones did not average as high as those left until the second growth was ripe, the difference being about five bushels per acre.

District.	Area Harvt'd. Acres.	Ave. Yld. Bus.	Total Yld. Bus.
N. W.	163,250	11.4	1,861,050
S. W.	607,130	7.9	4,796,327
N. Central	205,960	11.0	2,265,560
S. Central	337,126	7.6	2,562,157
Eastern	143,940	10.7	1,540,158
Prov., 1900	1,457,396	8.9	13,025,252
Prov., 1899	1,629,995	17.13	27,922,230
Prov., 1898	1,488,232	17.01	25,313,745
Prov., 1897	1,290,882	14.14	18,261,950

OATS.

The quality of the crop of both oats and barley is away below average.

District.	Area Harvt'd. Acres.	Ave. Yld. Bus.	Total Yld. Bus.
N. W.	102,300	22.3	2,281,290
S. W.	110,948	15.9	1,704,073
N. Central	63,200	24.1	1,523,120
S. Central	90,010	20.4	1,836,204
Eastern	62,650	22.5	1,409,625
Prov., 1900	429,108	20.5	8,814,312
Prov., 1899	575,136	38.80	22,318,378
Prov., 1898	514,824	33.6	17,308,252
Prov., 1897	468,141	22.7	10,629,513

BARLEY.

District.	Area Harvt'd. Acres.	Ave. Yld. Bus.	Total Yld. Bus.
N. W.	16,900	17.3	292,370
S. W.	29,785	16.9	503,366
N. Central	27,580	23.1	637,098
S. Central	42,776	17.6	752,857
Eastern	38,070	19.8	753,786
Prov., 1900	155,111	18.9	2,939,477
Prov., 1899	182,912	29.4	5,379,150
Prov., 1898	158,058	27.06	4,277,927
Prov., 1897	153,266	20.77	3,183,602

FLAX, RYE AND PEAS.

	Area in Crop. Acres.	Yield per Acre. Bus.	Total Yield. Bus.
Flax, 1900	20,437	8.04	164,313
Flax, 1899	21,780	14.0	304,920
Rye, 1900	2,480	10.4	25,792
Rye, 1899	3,217	20.0	64,340
Peas, 1900	780	11.6	9,048
Peas, 1899	1,366	15.0	20,490

TOTAL GRAIN CROP.

1900.	24,789,194 bushels.
1899.	66,009,508 bushels.

POTATOES.

	Area in Crop. Acres.	Yield per Acre. Bus.	Total Yield. Bus.
Northwest.	2,500	136	340,000
Southwest	4,520	116	524,320
North Central . . .	4,080	154	628,320
South Central . . .	1,920	109	209,280
Eastern.	3,860	136	524,960

Prov., 1900	16,880	132	2,058,210
Prov., 1899	19,151	168.5	3,226,395

ROOTS.

	Area in Crop. Acres.	Yield per Acre. Bus.	Total Yield. Bus.
Northwest	1,200	201	241,200
Southwest	2,090	198	413,820
North Central . . .	1,680	187	314,160
South Central . . .	640	156	99,840
Eastern.	1,872	205	383,760

Prov., 1899	10,079	265	2,670,108
Prov., 1900	7,482	194	1,452,780

LAND PREPARED FOR CROP OF 1901.

	Acres.
Breaking	153,056
Following	447,319
Fall plowing	958,462
Total	1,558,837

LIVE STOCK.

Cattle.—The number of beef cattle exported this season was 16,500. There were 25,000 yearlings or stockers shipped to the ranches in the Northwest Territories and 3,000 shipped to the United States. The trade in stockers may now be said to be diverted to the Northwest Territories, where there is

room and pasture for all the stockers that Manitoba can ever supply.

Hogs.—During the winter of 1899-1900 at least 10,000 hogs were imported from Western Ontario by Winnipeg packers, but during the summer of 1900 more Manitoba hogs were supplied to the packers than during any single season in the past. The receipts for the month of November past were in marked contrast with those of November last year. It is estimated that the farmers of Manitoba supplied for all purposes during the year at least 25,000 hogs. Winnipeg, for packers' use and fresh meat trade, can readily take at least 100,000 hogs each year, and if to this is added the ever increasing requirements of the British Columbia fresh meat trade the number will be much increased. If the packers in Winnipeg could secure a sufficient number of hogs to run their houses to their full capacity, so as to supply the British Columbia market with cured meats, it would be a question of a short time only until the number of hogs required would be at least 200,000. The possibilities of further increase, as well as the indications of interest of farmers in this industry, are very encouraging.

NUMBER OF LIVE STOCK.

	Horses.	Cattle.	Sheep.	Hogs.
1900	118,629	237,560	25,816	77,912
1899	102,655	220,243	33,092	66,011
Increase . . .	15,974	17,312		11,901
Decrease . . .			7,276	

POULTRY DISPOSED OF BY FARMERS.

	Turkeys.	Geese.	Chickens.
N.W. District . .	11,400	11,100	73,400
S.W. District . .	19,442	5,805	55,485
N.C. District . .	9,520	3,200	32,800
S.C. District . .	13,840	5,600	66,880
E. District . . .	10,560	3,760	41,440
Province. . . .	64,762	29,465	270,005

BUTTER.

	Pounds.	Price. Cents.	Value.
Dairy, 1900. . . .	2,083,920	14.45	\$301,145.64
Dairy, 1899. . . .	1,354,240	14.44	195,552.25
Creamery, 1900. .	1,254,511	19.18	240,515.40
Creamery, 1899. .	1,002,809	18.75	188,026.68
Totals, 1900 . . .	3,338,431		\$541,661.04
Totals, 1899 . . .	2,357,049		383,578.93

CHEESE.

	Pounds.	Price. Cents.	Value.
Factory, 1900 . .	1,021,258	10.02	\$102,330.05
Factory, 1899 . .	848,587	10.25	86,980.16
Total value, 1900.			\$643,991.09
Total value, 1899			470,559.09

Although the past season has been unfavorable to the production of dairy products, on account of the drouth and the extreme heat in the early part of the season, the business shows a thriving condition and a rapid increase. The price of dairy butter remains about the same, but the production has increased about 50 per cent. over last year's figures. The price of creamery butter is forty-three-hundredths of a cent higher than last year; which is higher than in any year in the past five years for Ontario creamery. The production is 25 per cent. greater than last year, with little complaint as to quality.

The price of cheese is twenty-three-hundredths of a cent less than last year, but the price of 10.02 cents per pound is greater than any year in the past ten years in Ontario.

The production is about 20 per cent. greater than last year, and of seven dealers in Winnipeg, two report the quality slightly inferior to last season, while the other five report the quality as superior to last season. It is well known that the progressive farmers of Manitoba are keeping up with the times.

Some adverse criticism has been directed against the dairy industry of the province, but the foregoing report clearly shows that the industry is in a good healthy condition.

The value of new farm buildings is estimated at \$1,351,000.

Crop of 1900 in the United States.

The final estimate for the year 1900 has just been issued by the agricultural department. In the winter wheat states 3,522,787 acres were abandoned and 26,235,897 acres harvested, from which 350,205,309 bushels were reaped. The losses were mainly in Ohio, Michigan, Indiana and Illinois. Kansas and Oklahoma had an extra large yield. In the spring wheat states, 1,793,467 acres were abandoned in the two Dakotas, leaving 16,259,488 acres reaped, with a yield of 172,204,096 bushels. Kansas and Nebraska are now leaving off spring wheat to a great extent, surer and better yields being got from fall wheat. About the usual area of winter wheat was sown last fall, and its condition on December 1st averaged 97 per cent. of the normal.

The corn crop of 1900 was one of the largest ever gathered, and is estimated at 2,105,102,516 bushels. Oats were also a splendid crop, totalling over 800,000,000 bushels. Barley and rye have made the poorest yields since 1887.

The Minnesota School of Agriculture.

It is now about ten years since Premier Greenway entertained the idea of having an agricultural school or college for the Province of Manitoba, but was prevented from taking any steps to carry out the idea, for lack of the needful funds. The same idea is now floating before the members of the present local government, with the probability of being able before long to put the scheme into practice.

Just what to aim at and how to set about it is a very important matter when a scheme so costly and with such possibilities before it is to be launched. Fortunately we have in the States to the south of us examples of the same kind of thing which supply most valuable object lessons, all the more valuable because employed in States whose general conditions very much resemble our own.

The State school at Fargo, North Dakota, is a recent creation, and perhaps the conditions of its origin and uses are much nearer our own than we could find elsewhere. But that of the State of Minnesota has a much longer history, has a fuller and more mature experience, and therefore presents in more firm relief the fulfilment of the ideal state-aided agricultural school than any that can be found elsewhere.



Hon. R. P. Roblin.

Premier of Manitoba and Minister of Agriculture

The writer has had many years' personal acquaintance with the school and nearly all its teachers, one of whom, Professor Shaw, was annexed from the Canadian side. The work of such a school is essentially progressive and expansive and each year some improvement is made, for so thoroughly has the government of the State become convinced of the practical value of the institution that the conductors have only to put their wants before the legislature, and in due time the needful dollars are provided. A very decided development made within the last few years was the provision made for the special education of farmers' daughters. Over this department Mrs. Virginia Meredith, a capable "farmeress" from Illinois, was placed, and with the best satisfaction to her employers. In a recent communication to the Indiana Farmer, that lady thus describes the schools whose work she shares in:—

The school is located midway between St. Paul and Minneapolis, at St. Anthony Park. One of the wonders of the west is these two great cities within ten miles of each other, the city limits of each adjoining the other. St. Anthony Park is a part of St. Paul, and just on its edge but outside the city limits lies the University farm, as it is called, and here are the grounds and buildings of the State Experiment Station, as well as those of the School of Agriculture. It is the equipment of the Experiment Station and the sympathetic attitude of the station staff that gives the great opportunity to make the School of Agriculture successful beyond any other in the world. The one grand element of success, however, is found in the loyal support of the people of Minnesota, as expressed in the liberal appropriations made by

the Legislature to equip and support the school.

The school has been in existence ten years, the attendance this year will be almost, if not quite, five hundred students. Girls were admitted three years ago. Aside from the very adequate equipment of laboratories and teaching force there are two features of the school that contribute very essentially to its success; first, is the fact that the school year is six months; under this arrangement the students may be at home during the summer months when the active farming is in progress, thereby the boy does not lose his place in the farm life. All experience seems to indicate that when the boy is away from the farm nine or ten months in the year he unconsciously loses his identity with the farm life and it very naturally follows that he loses his interest in the farm and farming, and so perchance drifts away into some other business. The students here accomplish in six months just about the equivalent of what the ordinary high school aims to do in nine months. This means that the student body works under heavy pressure; they are able to do it, however, by the judicious arrangement of text book and manual work; by the most careful provision for the preservation of health; by the aid of the fine climate; very largely on account of the remarkable earnestness that characterizes the students generally.

The second feature of the school to which I refer is the dormitory system; by requiring the students to live under the supervision of the faculty it is possible to guard them against many of the evils that befall young people when away from home influence, and on the other hand it is possible to build up a school spirit that is of immense value, it is possible, too, to give to the social life of the students a tone that will develop character and send them back to their homes with a taste for correct pleasures.

It is, of course, very expensive for the State to furnish all the accommodations necessary for the residence of several hundred students, but not to do so is in my opinion a mistaken idea of economy, especially would it be a mistake in a school made up of farmers' sons and daughters, because all thoughtful and observant friends of the farm recognize that the weak place in country life is the social side. The present barren, starved social life can only be enriched by a training for correct pleasures and a knowledge of how to approach and entertain one's neighbors. To me it seems essential that the social life of the student should be guided along right lines, and this is most easily done with the dormitory system.

The young men and women have quite a large proportion of their work together in the same classes, although there is a marked difference in the course of study where manual training is considered. The aim of the entire course is to touch the farm home, young men and women both study the sciences—plant and animal life, chemistry, mathematics—the boys go into the chemistry of soils and fertilizers, while the girls study foods; the boys have work in wood and iron, while the girls have sewing, cooking, home-management, economy, etc. It is deemed wise to have the young woman carry the study of plant life beyond botany into horticulture, gardening and forestry, in order not only that she may have some understanding of these valuable subjects and get the discipline that comes from orderly study, but that she may have an intelligent sympathy with the business of the farm. She takes an elementary course in agriculture, learning something of grains, grasses and soils, enough to make her see the home farm with new eyes and new interest. The course in animal husbandry also gives new thought, and to many girls is a revelation of a new field of interest on the farm. Of course the young men carry this and all purely agricultural subjects much farther than is done in the classes open to the girls. The girls occupy a building erected three years

ago at a cost of \$25,000; the number, however, has outgrown its limits, so the Board of Regents is including in the budget to be presented to the coming legislature an item of \$12,000 for an addition to the present building. We now have 83 young women enrolled, taking the regular course of study. We do not admit any for special courses.

As an indication of the public spirit that stands behind the school, I will say that the legislature will be asked to appropriate about \$250,000 for buildings, and the general impression is that it will be done without opposition. There are already 12 large and handsome buildings on the campus, a fine testimonial of the appreciation of agricultural education.

Distribution of Samples of Seed Grain and Potatoes.

Wm. Saunders, Director Experimental Farms, Ottawa, writes:—

"During the past 12 years samples of those varieties of grain, etc., which have succeeded best on the several Experimental Farms have been distributed on application in 3-lb. bags, free through the mail, to farmers in all parts of the Dominion. The object in view in this distribution has been to add to the productiveness and improve the quality of those important agricultural products throughout the country, by placing within reach of every farmer, pure seed of the most vigorous and productive sorts. This work has met with much appreciation, and a large measure of success.

"Under instruction of the Hon. Minister of Agriculture another distribution will be made this season. Owing to the very large number of applications annually received, it is not practicable to send more than one sample to each applicant—hence if an individual receives a sample of oats, he cannot also receive one of wheat, barley or potatoes, and applications for more than one sample for one household cannot be entertained. These samples will be sent only to those who apply personally, lists of names from societies or individuals cannot be considered. The distribution will consist as heretofore of samples of oats, spring wheat, barley, field pease, Indian corn and potatoes.

"Applications should be addressed to the Director of Experimental Farms, Ottawa, and may be sent any time before the 1st of March, 1901, after which date the lists will be closed, so that the samples asked for may all be sent out in good time for sowing. Parties writing will please mention the sort of sample they would prefer, naming two or three different varieties of their choice. Should the available stock of all the varieties named be exhausted, some other good sort will be sent instead.

"The samples of grain will be sent early, but potatoes cannot be distributed until danger of injury in transit by frost is over. No provision has been made for any general distribution of any other seeds than those named.

"Letters may be sent to the Experimental Farm free of postage."

The Brackman-Kerr Milling Co., at Edmonton, are running their oatmeal mill night and day after Jan. 1st. This is about the only such mill in the west that is turning a wheel and an indisputable proof of the fitness of the country for growing first-class oats.

A novel thrashing machine is being used by the Doukhobors. It is made of three-inch plank in the shape of a stone boat, which is covered with alternate layers of flint arranged like the teeth in the cylinder of a thrashing machine. The grain is placed on the floor and this loaded with a weight is drawn over it. In one village alone they have 300 bushels which they have thrashed in this way.—Swan River Star.

Nitragin.

Every farmer knows that on our new lands here, clover is very difficult to grow. The reasons for this are threefold. In the first place the soil is too new and rank. The clover plant grown on it has no substance and winter kills as a rule the first year. This will change in time, but a larger blend of clay is also needed, as is evidenced by the fact that clover takes hold readily in the hollows formed along railroad grades. Another hindrance is the want of winter cover. It is the winter covering alongside the railroads as well as the clay soil that contributes to the preservation of the clover stripe along the railroads, where it has been ever since that road was graded, when seed from the hay used started its growth.

There is one more reason for clover failing here which has only come to our knowledge in recent years. On the roots of clover, pease and other leguminous plants, there are microscopic forms of insect life, which play an important part in the life work of the plant. One leading form of their work is to store up in small cells nitrogen by means of which the plant is fed, and when it dies furnishes a ready store of nitrogen as food for such crops as wheat.

Till these bacteria have got a hold in new soil, it may be ever so well suited for clover, but the clover will not grow. This has been demonstrated with singular clearness by the experience of the Western States. In Southern Minnesota, 40 years ago, it was impossible to make clover of any kind grow. Now second crop clover, if allowed to go to seed, produces several bushels to the acre, and is therefore a very profitable crop. The change was easily traced to the gradual spread from the east of the clover root bacteria.

And now scientific men have taken to the artificial propagation of these clover root bacteria, which they sell under the name of nitragin. It is regularly manufactured in Germany, and sold in liquid form. The animalculi living in that liquid can only be kept there for a few months, and unless used within that time they perish. It must not be submitted to a high temperature, and want of knowledge on these two points has occasionally led to the condemnation of the preparation as a fraud. A bottle of the liquid in good condition will soak enough clover seed to sow half an acre, and if other conditions are right the bacteria from that half acre will readily spread. Its use for this purpose has been successful for some years on the Experimental Farm at Ottawa, and last year it was tried with fair success at Brandon. It remains to be seen whether the soil of the farm is yet in the proper condition to grow the clover continuously, but there is ample evidence that the nitragin itself is no fraud.

The latest proof of its value is supplied by the Alabama Experiment Station. Clover there was previously an impossibility. Seed treated with nitragin was sown on test plots on which the growth of clover was luxurious, while the plants on the untreated plots were mean and sickly. It became evident that the influence from the treated plots was spreading on the untreated, and the professor who reports on the test says that the use of nitragin had in this case the effect of increasing the yield ten times beyond what it could have made without such help.

There are no terms strong enough to condemn the vanity of parents who will allow a daughter's charms, prospects and advantages to be advertised in the public prints.

F. Cunningham and A. B. Potter, of Montgomery, Assa., have received word from Paris, France, that they will get a grand prize and diplomas, the former for wheat and the latter for pease. This same wheat was awarded a gold medal for the best in the Territories in 1899, and the pease were first at Winnipeg and Brandon Exhibitions, 1899.

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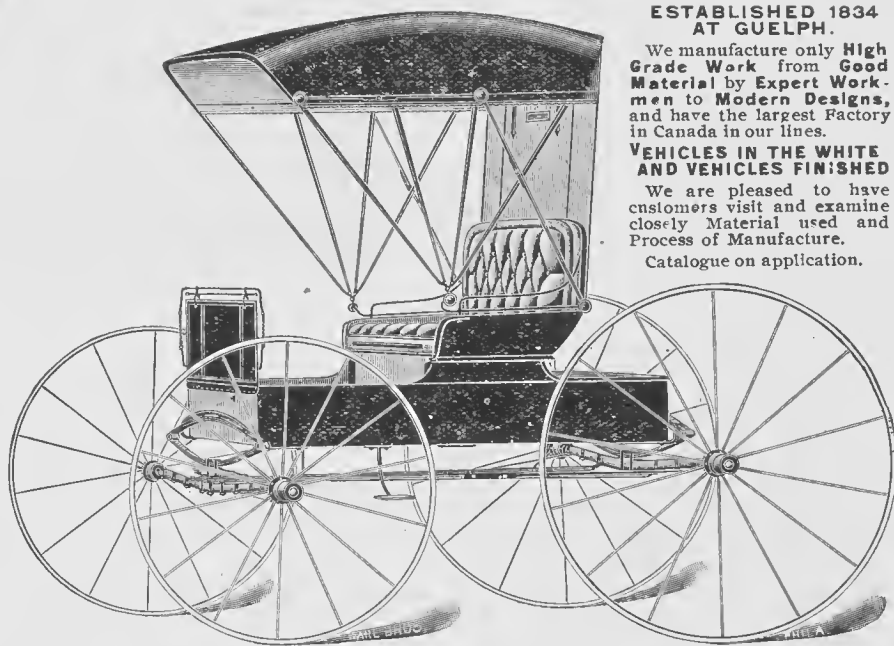
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Grain at Wolseley.

The East Assiniboia Agricultural Society held its annual show of grain at Wolseley on Dec. 7. Some of the exhibits showed the damaging effect of last harvest's weather, but others were very good. There were 12 entries of 10 bushel lots of wheat. The first prize wheat, barley and oats were very fine. Angus Mackay, of the Indian Head Experimental Farm, did the judging. His awards were as follows: Special prize, \$25, for best 10 bushels Red Fyfe—Donald Campbell. Best 2 bushels Red Fyfe—1st, Donald Campbell; 2nd, Wm. Biesly, Jr.; 3rd, W.

Biesly, Sr. Two bushels white oats—1st, G. A. Hewson; 2nd, G. P. Gardner; 3rd, Wm. Sharp. Two bushels black oats—Wm. Dixon. Best 2 bushels barley—1st, Wm. Dixon; 2nd, H. Edwards; 3rd, C. Thompson. Brome grass seed—Wm. Sharp.

The Countess of Warwick has established a model farm at which ladies in straitened circumstances are being educated to gardening, dairying and poultry keeping. Her charge for board at this hostel, as it is called, is \$325 to \$625 per annum. The teaching is given free.

Eradication of Weeds.

BY RICHARD WAUGH, WINNIPEG.

First Prize Essay read at the Farmers' Institute Meeting held at Indian Head, Assa.

A great deal might be said about the nature of the different varieties of weeds and different ways of dealing with them, but the best course I know is to begin with the farmer himself. Get him to see that weeds are daylight plunderers, that are feasting on the moisture and soil food of the crops, out of which he seeks to gain his living, and if he has any spirit he will try to down the thieves. Slackness of purpose in the man whose business it is to do the fighting and plan for the prolonged campaign that is necessary to eventual success, is the sure forerunner of failure, for wherever there is a will there will be found a way to achieve the desired result.

Accurate knowledge of the nature of the weeds to be eradicated is another essential to success. Our worst weeds are annuals and all the worst varieties have been imported. In the Northwest the "Canada thistle," an importation from England and not a native, is not abundant, and the native grasses are not dangerous, therefore our first study must be the annuals, whether classed as noxious or not. The weedy plants of the original prairie, have been slowly preparing the soil for our purposes, and can nearly all be killed by well-planned breaking and backsetting.

Of the annuals, French weed is an exceptional variety. It will germinate from April to November, and the plants that start in the fall will live under the snow all winter. Every other annual I know of will die in the fall, and if not mature enough to leave half ripe seed, will do no harm and may do some good by holding snow. Any French weed found alive in spring should at once be cultivated out of existence before grain is sown.

The size of seed is to be taken into account. Small seeds such as French weed rarely germinate if buried more than an inch and a half. Buckwheat and ragweed being large, will come up through four inches of cover, and are usually rather late in appearing.

Spring is the great growing season for all annuals, and on that account, a late sown crop such as barley may be put in well on in June after repeated cultivation earlier in the year has germinated and, as a natural result, destroyed, myriads of such weeds.

But in a district mainly devoted to wheat growing the best of all means of weed destruction is early and skilfully handled summer fallowing of last year's stubble. Let me here outline my ideal for such work. I would in a damp fall such as we have just gone through, harrow or otherwise surface cultivate the stubble field that all the seeds dropped on the surface might be put in the best position for early germination next spring. Another round of the harrow in spring would help still more to tickle those surface seeds into life. As soon as the main crop of the season has been got in, the plowing of that fallow should be started and carried through, using the harrow close behind the plow so that as little moisture as possible should be lost. Deep plowing always preferred. Two rounds of the harrow close behind the plow should make a mould in which foul seeds will germinate freely. Without using the best means to ensure prompt weed germination, after the land has been plowed, all hope of free destruction of annuals may be abandoned till summer rains supply another opportunity. But if rightly caught, that land at that season should be moist enough to start weed germination. As soon as they show above ground two more rounds of the harrow will kill them and start a fresh crop to be killed in the same way. Buckwheat will not come with the first flight but all its seeds

within reach of the call of spring will come later and get killed. Should a rainy day come along, the work of weed destruction will receive fresh impetus. The harrow can be started again as soon as the land is in trim, and by August nearly all the foul seeds near the surface will have been coaxed to grow to their own destruction. In rare cases rain might come to check harrowing long enough to let the weeds get so strong that the harrow would not dislodge them, and in that case the cultivator would have to be used. But here the risks are all for a shortage of moisture, and the harrow, the cheapest of all weed destroyers, will, if wisely guided, ensure a clean surface for next year's seeding and an ideally perfect seed bed for wheat at the same time.

Another splendid plan for killing weeds is to use the weeder among the newly sprung wheat as soon as the weeds show in the seed leaf. Buckwheat will not come in time to be affected by his early round of the weeder. But I have seen the harrow used with perfect success sometimes wrong side uppermost on well-drilled grain

ing it clean and truly with a six-inch furrow and sowing it with six-rowed barley. A few spots of it in a wheat field need cause little anxiety.

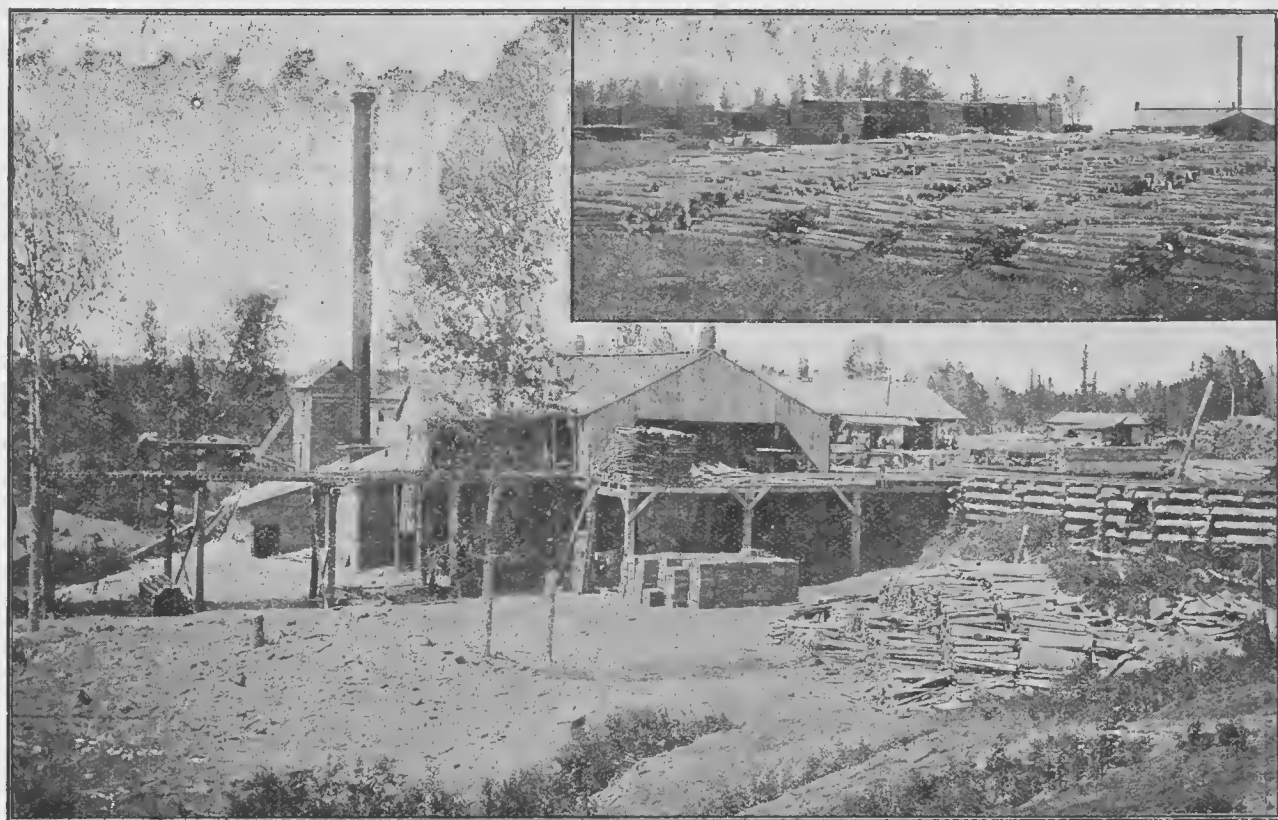
If thistles are found in small patches, cover them with a straw stack or dung pile. If more abundant, late spring plowing just when they are in bloom, not later, and the free use of the cultivator to hinder them from forming green leaves, will work them almost entirely out in a single season. Early fall plowing has the same effect, if well done.

The prevention of weed growth by means of early and well planned summer-fallowing, combined with the use of the light harrow or weeder, had they been known and practiced earlier would have to a great extent kept down the excessive weed growth from which most of us still suffer, but now that the soil has got saturated through ignorance and neglect, the task of suppression must be slower and more difficult, for by no possible effort can all the bad seeds in any kind of land be cleared out in one year. We must stay with the job and vary our treatment. Rotation with green crops, that can be sum-

iliar phrase, it will need "a long pull, a strong pull and a pull altogether," to remedy the evil largely due to our past carelessness and indifference. As we stay with the work, we are sure to find out the easiest and best ways of doing it.

The question of expense is one that must not be overlooked. I have heard a learned professor advise a crowd of farmers to collect by hand the roots of sweet grass and couch grass, and hand-pull annuals. When we have reached the stage that hand-pulling is feasible the victory will have been nearly won. Please note that I have propounded modes of treatment by which one man can go over from ten to twenty acres a day and kill weeds wholesale in very cheap and simple ways, which, besides killing weeds at their most tender stage of existence, are also the very best means to ensure a large and profitable crop of grain.

Personalities that are made to do duty as family jokes are never funny to strangers.



Saw-Milling at Garland, Man.

The situation of Theo. A. Burrows' Mill at Garland is a very pretty one. It is located right on the Canadian Northern Railway, about fifty miles north-west of Dauphin, and a few miles to the east of the Duck Mountains, and employs about fifty men. Something like 40 000 feet of lumber is manufactured daily. Large quantities of shingles and laths are also sawn. From twelve to fifteen cars of lumber are shipped per week. Last spring the writer was informed that there were about five millions of feet of lumber—sawn and unsawn—in the yard at this point. Some splendid spruce logs, running up to 30 inches across the hase, were as fine looking "food for the saw" as could be found anywhere.

five inches high, to kill buckwheat four inches high. The weeds were crushed and the grain nothing the worse. Besides killing the weeds the spring use of the light harrow or weeder provides a choice mulch for the growing grain.

In very extreme cases land might be plowed twice in one summer to bring more seeds within reach of the germinating influences of warmth, air and moisture, but the ordinary plan is enough for all ordinary cases.

There are a few comparatively harmless varieties of biennial weeds in this country, but the methods good for annuals are equally effective in their case.

Should there be patches of sweet grass on low plots, the harrowing, always good against annuals, would break the grass roots in small pieces and spread them all over the field. This can be avoided by steering clear of such spots when the harrow is being used, and letting the grass grow a few inches, then plowing down all such spots, doing the same if need be next spring. But sweet grass, if not unwisely handled, is not a dangerous weed, and can be effectually disposed of when it is found in any quantity, by allowing it to grow till the end of May, then plow-

mer cultivated, would be a great help. Next to that Brome grass. We should never forget that weeds in excess are just nature's silent protest against excessive and continuous wheat growing. The longer we persevere in trying to grow wheat only or mainly, the more difficult will it be to keep down weed growth.

One form of prevention has often been neglected. We have carried round from one farm to another, in threshing machinery, lots of bad seed, and also left the grades and idle lands to ripen seeds, such as tumbling weed, till in a few years the country was covered and a big contract prepared for all who work for their suppression. Many such seeds will roll for miles in a winter day, and the growth of maple hedges along road allowances might do much to mitigate this form of weed circulation. The local weed inspector should not confine his work to the mere destruction of weeds, he should be a reliable adviser on all such matters to those who through lack of skill and experience fail to do their share of weed suppression. The task is a very serious one, and cannot be too early or too vigorously prosecuted. To use a fam-

Potato Growing.

Among a great many useful experiments made by the Experimental Union of Ontario various modes of handling potato seed have been tried. No mention is made of uncut potatoes. But the difference between seed cut and planted directly afterwards and the same potatoes left cut a few days resulted in nearly 20 bushels more yield to the acre for the seed planted when cut. The effect of coating the newly cut seed with land plaster was to increase the yield 16 bushels to the acre. The quality of the crop after dusted seed was also very much superior.

W. G. Rogers, Carberry, Man., Jan. 8, 1901: "The Nor-West Farmer has made progressive strides along the avenue of advancement during the last decade, and I hold that the Manitoba farmer desiring to keep abreast of the times, or even make an honest living without such a journal, must necessarily labor very hard or work himself to death to accomplish it, while his neighbor who reads The Nor-West Farmer, learning the practical lessons from the leading agriculturists of the country which appear in every issue, must make labor light and life worth living."

How Much Wheat Shall We Sow Per Acre?

By T. W. Hutchinson, Ponoka, Alta.

When I started raising wheat twelve years ago I was under the impression that the more seed I sowed the better. In fact, I had an idea that the more I sowed the more I would reap. Careful observation soon convinced me to the contrary. The second crop I sowed was eighty acres, fifty acres on breaking, thirty acres on the previous year's backset. Thirty acres on one side of the field was so thin, owing to being badly covered and birds getting the seed, that several neighbors told me I would not get my seed off it. This I fully believed, but the way that field stood out was simply amazing, and the length of the heads was astonishing. This field was threshed by itself and yielded twenty-seven bushels to the acre from the machine. The other fifty acres, which came up in good shape and looked on the start fully three times as good, yielded twenty-three bushels per acre. The thirty acres took only forty pounds of twine to tie it, or I might say, one pound of manilla twine tied seventeen bushels of wheat. The fifty acres took a little over two pounds per acre and averaged about eleven bushels to the pound of twine. The reason for the thin field turning out so much better than the other was in the size of the heads. I counted lots of heads containing between 60 and 70 grains each.

This gave me a pointer and I decided to experiment a little on my next crop. The following year I sowed one hundred and thirty acres of wheat with a Havana press drill. On one hundred and ten acres I sowed one and one-half bushels per acre, the remaining twenty acres I sowed with one bushel per acre. The one hundred and ten acres turned out sixteen bushels per acre and the twenty acres twenty bushels per acre. The straw was fully four inches longer on the thin sowing. The next year I sowed one acre with one peck of wheat, about ten acres with one-half bushel, ten acres with three pecks and the remainder of my crop with one bushel per acre. These plots were all sown on a one hundred and sixty acre field side by side and the amount sowed was measured after being treated for smut. The plots that were sown to one peck, and one-half bushels, looked thin until the latter part of June, when from that time on there was no perceptible difference to be seen in the crop. I did not keep these plots separate at threshing, but was convinced that the thin sowing was fully equal to the other. From that time I have only once sown over one bushel per acre after being bluestoned, and then I sowed one full sack on one acre. It looked nice when it came up, but the first dry spell went hard with it and at the time of cutting the binder would hardly catch it, while the thin sowing was a good crop.

To sum up this question and go into all the different details would take a lot of space, as there are so many different aspects to it. I have no doubt locality has a great deal to do with it. The locality where this grain was sown is about 25 miles S. W. of Deloraine. The soil is a black sandy loam, practically the same as most of Southern Manitoba, but possibly more subject to drouth. Another thing and one of the most important, is the quality of land. Land that is in good shape, such as summer fallow and sown early, needs far less seed than old land or land that is sown late. New land that is rough also requires a little more seed than new land that is in good shape. The last few years I have sown the following amounts of seed, after being treated for smut: On summer fallow, new land and fall plowing, that is in good shape, 50 pounds; on fall plowed land that shows signs of wear and late spring plowing, 60 pounds. The reason I always sow about the same amount, whether the grain is plump or slightly shrunken, is because

I always fan my seed grain twice, putting it through a large sieve, thereby taking out any small grain, and another reason is, that since following thin sowing I am very seldom troubled with any shrunken grains. I sell nearly every bushel I raise for No. 1 hard, and at the same time I raise as good a crop (and generally a few bushels better, especially if the season is a dry one as any one in that part of the country.

Now I don't want anyone to go and sow their land next spring with one-half bushel or three pecks of wheat per acre, through what I have said, as I am simply giving my own individual experience; but I do think this question is a little more worthy of consideration on the part of farmers, who can experiment in their own districts. If by such means they can effect a saving of three pecks or one bushel of wheat or oats per acre, there is no one more deserving of it than themselves.

Tests for the Vitality of Seed at the Central Experimental Farm.

Wm. Saunders, Director, Experimental Farms, Ottawa, writes:—

The past season has in certain localities been unfavorable for the perfect maturing of grain. In some districts it has been injured by rain during harvest or from being stacked before fully dry, thus causing it to sprout or heat, while in other localities it has suffered more or less from early autumn frost. When exposed to either of these conditions cereals are apt to lose a portion of their vitality or to have it so weakened as to produce when sown an unsatisfactory growth. The character of the crop is greatly influenced by the quality of the seed used, and to obtain the best results it should have its germinating power unimpaired, so that when placed in the soil the young plants may make a prompt and vigorous start. Hence it is very important that farmers should ascertain whether the grain they are holding for seed possesses the vitality necessary to produce a good crop.

By instruction of the Honorable Minister of Agriculture, provision has been made whereby the vitality of seed can be ascertained without cost to the individual, and any farmer in the Dominion, who may have any varieties which he desires to have tested can get the information he seeks, by forwarding to the Director of the Experimental Farms, Ottawa, samples of such grain or seeds. Samples may be sent free through the mail and an ounce or two is sufficient for the purpose. About two weeks are required to complete a test. It is hoped that all who desire to avail themselves of the provision offered will send in their samples early so that the work may be completed in good season.

A Wisconsin farmer who was in the way of making extensive contracts with lumbermen for hay was always noted for the bright green quality of his hay. How he did it was a secret of his own, but this is about the size of it. Green cut hay has always a tendency to mould. He met this difficulty by the use of air slaked lime. On the corner uprights of his hay rack he hung two pails of this dry lime. When loading he dusted the hay with a handful or two of the lime, using about the two pails on a good load of hay. By the time the hay was built in the stack the lime was fairly well mixed with the hay, and must have killed any tendency to mould, for that hay always came out clear and bright. There was a little dust on it, but the horses seemed to like it better than any other that was offered them. It is worth trying here when the next hay season comes round.

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Prize for Arrangement of Farm Buildings.

A subscriber suggests that we offer a prize for arrangement of farm buildings. The idea is a good one in some ways, but has its limitations. One of these is the nature of the ground on which it is proposed to build. Another is the fact that nearly all our farm buildings have been put up piecemeal, and perhaps very few of them would have been arranged as they now are if the owners had had a clean field to begin on. But we agree that the suggestion may prove useful, and offer \$5.00 for a sketch showing what in our judgment is the most desirable arrangement for the buildings needed on a half-section farm in Manitoba where mixed farming is followed. If reference be made to existing combinations, so much the better, as it will give a chance to discuss the merits and defects of such arrangements by those who know the places referred to. It is manifest that there may be on many farms local conditions which a clear-headed planner can turn to good account. Convenience of access from one building to another is of importance in a winter climate such as ours, but that again is offset by the extra risk of fire, when most of the buildings are combined in one block. A shelter belt at proper distance from the buildings is always a desirable feature. What we want is a sketch, showing relative location of farm house and other buildings, along with the yard, space, garden ground and shelter belt best suited to a mixed farm in Manitoba.

"As unto the bow the cord is,
So unto the man is woman;
Though she bends him, she obeys him,
Though she draws him, yet she follows.
Useless each without the other!"

Thus the youthful Hiawatha
Said within himself and pondered,
Much perplexed by various feelings,
Listless, longing, hoping, fearing,
Dreaming still of Minnehaha,
Of the lovely Laughing Water,
In the land of the Dakotahs.

—Longfellow.

Why Kruger Loved the Jews.

A popular Jewish paper tells a story of Oom Paul, who is known to be very partial to Jews as a body. He was conversing with Mr. Sam Marks, of Pretoria, and jocularly remarked: "It is true you Jewish people have no country of your own, but you are very dear to me; for does not the Bible bristle with incidents of the greatness of Israel? Why, we, as Christians, owe everything to the Jews. But," he added, with a shrug of his shoulders and a twinkle in both eyes, "where can you find in the Bible, in the Old or New Testament, any reference to Englishmen?"

The old man chuckled hugely at this sally, and slapping Mr. Marks on the shoulder, he went on: "Yes, I say, where in the Bible can you find any reference to those Englishmen, who now make such a noise in the world? Where, I ask?"

There is no end of entertainment in minding your own business.

Why is it dangerous to take a nap in the train?—Because trains run over sleepers.

Remember, you cannot climb the ladder of success by treading on other people's corns.

The most dangerous time to go in the country is when the trees are shooting and the bull rushes out.

When the chimney is cold it is often difficult to light a fire without making a great deal of smoke. To prevent this, burn a few pieces of paper in the chimney or smoke flue and thus start an upward current.

When women go to buy a dress in Japan they tell the shopkeeper their ages, and if they are married or not, because there are special designs for the single and double relations of life as well as for the ages. The consequence of this painful custom is that one can tell the age of every woman and tell whether she is married precisely as though she were labelled.

The Water Witch.

Whether the method of finding water by the use of a hazel twig or similar appliance is a delusion or a reliable process, has always been a matter of dispute. For some years W. F. Barrett, Professor of Experimental Physics in the Royal College of Science at Dublin, Ireland, has been engaged investigating this question and has recently issued his second report on the result of his enquiries. In his first report he cited 152 cases, in the next he deals with new cases, some of them worked out under his own supervision. About 90 per cent. of all the cases have been successful in their results. The "dowsing," as this water finder is called in England, sometimes works without the aid of the forked stick, but whether he does so or not must use an extreme amount of concentrated attention if he is to succeed. Very prominent people, such as Lord Salisbury and Lord Lansdowne, have employed these water finders and the public in general have great faith in their skill. One way tried by Prof. Barrett was to send different men over the same ground, and even if they did not select exactly the same places, they were generally successful. The learned men who have followed the investigation are trying to account in different ways for the possession by a few individuals of this peculiar faculty in a special degree, but still seem a good deal bewildered. Professor Barrett himself thinks that hypnotism or some similar species of "clairvoyance" may be provisionally taken as an explanation of this peculiar faculty, which cannot be explained on any principle known to exact science.

Aid to Cheap Transportation.

One of the strongest objections hitherto made against the feasibility of the Hudson's Bay railroad as an outlet for the produce of the great Saskatchewan valley, is that the bay is frozen nearly half the year. This difficulty may soon be successfully dealt with in the case of the St. Lawrence navigation, and in due course of time the Hudson's Bay outlet may be dealt with in the same way. Speaking before the British Association for the Advancement of Science, Admiral Makaroff, the originator of the scheme for breaking the ice in the Russian ports of the Baltic, said that the noted ice-breaking steamer Yermak, which was built by the English firm of Armstrong, Whitworth & Co., to his design, had in a recent voyage in the Polar seas under his command, been able to pound her way through 15 feet of ice at a rate of half a mile an hour. She was not built of a strength for continuous work so severe as that, but with such possibilities Polar exploration is divested of its most serious difficulties, and Polar navigation in seas like Hudson's Bay and Straits is only a question of steam power.

Agriculture in District Schools.

In response to requisitions made by Farmers' Institutes and Agricultural Societies, the superintendent of Vermillion County Schools, Illinois, has introduced the study of agriculture as a branch of common school education. The plan has already been operated a year and is found quite popular. He uses as class books, "Practical Agriculture," by Prof. C. C. James, of the department of agriculture, of Ontario, and "The Principles of Agriculture," by S. H. Bailey, professor of horticulture in Cornell University. It is the purpose to make the study of farming as practical as possible, and arrangements will be made for work along the line of experimentation and the intelligence of the pupil will be appealed to rather than the memory. The everyday facts of farm work, the growth of plants, the fertility of soils, and their constituent elements, etc., will have first attention.

Suggestions From Subscribers.

In answer to our request for suggestions from subscribers, the following have just come in. A few more will still be welcome.

"May I suggest that you invite your readers to send in essays on wheat growing (the methods they have found most profitable and practicable). A few years back you published the prize essays on wheat growing. I was a new comer and knew absolutely nothing about farming—how helpful those essays were to me. I read and re-read them many times, and found them reliable. Would not a repetition of such papers be valued by the new comers who are seeking for advice on the best methods for spring work?"

"What is the best way to utilize the manure? I think there is no better plan than spreading on the fields straight from stables taking the precaution to leave all dry bedding in stables, and to spread the manure thin."

"Allow me to say I have found The Farmer sound and reliable in its teachings and warnings; one will not go far wrong if its pages are carefully studied and practised."

Played Out.

There are lands in this country that are already regarded, and with much show of truth, as played out. But is this really the fact? These same lands if subjected to chemical analysis would show lots of dormant plant food, and when our farming skill is equal to the skill of that chemist we will be able to bring that dormant food into active use as fast as we need it. Our business is to cultivate so that plant food can be made available just when the plant needs it, not before or after. By skilled cultivation, what is called the mechanical condition of the soil can be greatly improved, and that in combination with intelligent manuring will fit the soil for all the duty we can properly lay upon it. Cut and run farming is frowned on by nature, and that is only another name for nature's God.

Scotland with a population of 4,000,000, has only about twice the area under cultivation that is worked by Manitoba with less than one-twentieth of her population.

Rosthern farmers want a grist mill and a meeting is to be held to discuss the scheme of giving a bonus for the purpose of inducing some one to build in the near future.

The average yearly wage of a Danish farm laborer last year was \$60, and his board was about the same, making the yearly cost to the farmer of such a man only \$120. This is higher than for previous years.

The 23rd All-England plowing match was recently held in Kent, when 124 picked men competed. Men working with plows made by Howard, of Bedford, had nearly all the prizes and the championship of the field.

A correspondent in an exchange suggests that a tax on every dog of \$2 a year, to be paid to the road building fund, would do two very useful things. It would discourage the keeping of idle dogs and help to fill the country with better roads.

The Oak Lake News quotes the experience of W. Gompf of Woodworth, who kills two birds with one stone by blending grain and stock growing in the following manner. Late in the summer he sows oats thinly on his summer fallow, which gives him pasture when he brings his stock from the herd, and by doing this it also saves the soil from blowing in the early spring. On his own land he has so far paid most attention to grain growing, sending out his young stock in summer with a herd. His present plan does well in the meantime, but as time goes on he will have to grow Brome grass instead of late oats.

Points of Excellence.

A Few Reasons Which Are Rapidly Making a New Catarrh Cure Famous.

Stuart's Catarrh Tablets, the new Catarrh cure, has the following advantages over other catarrh remedies:—

First: These tablets contain no cocaine, morphine or any other injurious drug and are as safe and beneficial for children as for adults; this is an important point when it is recalled that many catarrh remedies do contain these very objectionable ingredients.

Next: Being in tablet form, this remedy does not deteriorate with age, or an exposure to the air, as liquid preparations invariably do.

Next: The tablet form not only preserves the medicinal properties, but it is so far more convenient to carry and to use at any time that it is only a question of time when the tablet will entirely supersede liquid medicines as it has already done in the medical department of the United States army.

Next: No secret is made of the composition of Stuart's Catarrh Tablets; they contain the active principle of Eucalyptus bark, red gum, blood root and Hydrastin, all harmless antiseptics, which, however, are death to catarrhal germs wherever found, because they eliminate them from the blood.

Next: You cannot cure catarrh by local applications to the nose and throat, because these are simply local symptoms and such treatment can not possibly reach the real seat of catarrhal disease which is the blood; for this reason inhalers, douches, sprays and powders never really cure catarrh, but simply give temporary relief which a dose of plain salt and water will do just as well.

Catarrh must be driven out of the system, out of the blood, by an internal remedy because an internal remedy is the only kind which can be assimilated into the blood.

Stuart's Catarrh Tablets do this better than the old form of treatment because they contain every safe specific known to modern science in the antiseptic treatment of the disease.

Next: The use of inhalers, and spraying apparatus, besides being ineffective and disappointing is expensive, while a complete treatment of Stuart's Catarrh Tablets can be had at any drug store in the United States and Canada for 50c.

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See page 6 for Steel Roller.

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AGENTS WANTED.

John Geiger, Douglas, Man., Dec. 17, 1900: "I have been taking The Nor-West Farmer for the last two years, and I must say that it is a very valuable paper to the farmer."

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We take pleasure in offering to the public a saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than by any process known. A saw, to cutfast, "must hold a keen cutting edge."

This secret process of temper is known and used only by ourselves.

These saws are elliptic ground thin back, requiring less set than any saw now made—perfect taper from tooth to back.

Now, we ask you, when you go to buy a saw, to ask for the Maple Leaf Razor Steel, Secret Temper Saw, and if you are told that some other saw is as good, ask your merchant to let you take them both home and try them, and keep the one you like the best.

Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

It does not pay to buy a saw for one dollar less and lose 25c. per day in labor. Your saw must hold a keen edge to do a large day's work.

Thousands of these saws are shipped to the United States and sold at a higher price than the best American saws.

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The Rocky Mountain Forests.

In a recent contribution to Rod and Gun, a Canadian periodical, J. S. Dennis, deputy minister of public works for the Territories, points out the advantages to be gained by preserving as much as possible the natural timber on the eastern slopes of the Rocky Mountains. Beneath the shade of this forest growth mosses collect and preserve the melted snows from evaporation till they have first done duty in watering the country to the east of them. As irrigation extends the necessity for a reliable water supply in the hot summer will make the beneficial action of such natural methods of water storage more manifest. Towards the north there is a much greater supply of water brought in by the clouds from the Pacific coast, and the rainfall of the district north of Calgary is pretty liberal. But as we approach the American boundary the rain and snow fall is lighter, hence the necessity for the irrigation system now being introduced and for conserving the forest areas which help to hold it. Mr. Dennis says: "Something has already been done towards that end by the reservation as a forest area of the eastern slope of the Rocky Mountains from the Bow river south to the international boundary, and great credit is due the present Minister of the Interior, the Hon. Mr. Sifton, for having taken up this question in the press of multitudinous duties, resulting in the organization of a forestry branch of his department."

Value of the Bee.

The value of the bee in the work for fertilizing plants by carrying pollen from one plant to another is greater than its use in producing honey. In fact, without the aid of bees many crops would be complete failures. Darwin found that in 100 heads of purple clover protected from the visitations of bees not a seed was produced, while 100 heads visited by bees produced nearly 3,000 seeds. When two varieties of certain plants are grown in the same neighborhood there is a liability of cross-fertilization, as bees forage over a wide territory. It will, therefore, pay the farmer or fruit-grower to keep at least one hive of bees or encourage his neighbor to do so.

At the Oregon Experiment Station they forced a number of peach trees into bloom under glass last November, and introduced a colony of bees into the house, first protecting one tree so that the bees could not get to it. From that tree all the fruit dropped when the stones began to form. From the others not a fruit dropped, and the fruit was so abundant that it was necessary to thin out severely. This shows very clearly how much every orchardist is indebted to the bee-keeper for the success of his fruit crop, as without the bees there would not be insects enough to pollinise the blossoms.

Bee-Keepers' Convention.

The annual convention of the Ontario Bee-Keepers' Association was held at Niagara Falls early in December. The financial affairs of the association are in good shape. The 1900 crop of honey was a very light one. The inspector of apiaries reported that foul brood was on the decrease, owing to the instruction and assistance given by the inspector. Excellent addresses and papers were given and the association asked to make an exhibit at the Pan-American Exposition.

The Oldest Tree in the World.

The oldest tree in the world is reported to be an oak, on the Island of Cos, in Asia Minor, which, according to a painstaking German investigator, has attained the very respectable age of 2,900 years. The authority has arrived at this conclusion from a careful examination on the ground. Tradition has it that the philosopher Hippocrates, who was born on the island, often assembled his pupils under the welcome shade of this very tree's branches. Now, Hippocrates lived five centuries before the Christian era, and if this is the same old tree it has indeed established a fine record for longevity. The trunk of this ancient oak has a diameter of over 27 feet.

Report of the U. S. Secretary of Agriculture for 1900.

Only those who can find time to read and study this report can have any idea of the extent and value of the work now under the control of the U.S. Minister of Agriculture. His field of operations extends from Alaska to the equator, and the remotest wilds of Siberia have been ransacked for plants and seeds that could be turned to good account at some point or other in the widely differing soils and climates of the different States of the Union. In experimental work, besides a valuable central station at Washington, every State of the Union has its own station in close co-operation. The grass garden at Washington, with its nearly 500 varieties, is only one example of the extent and thoroughness of the work of the botanical department, while its herbarium contains more than 5,000 mounted specimens of grasses and forage plants. The publication department at Washington has sent out over 7,000,000 copies of the various publications issued, besides refusing ten times more applications than ever before.

Besides botany and the great work of seed and plant distribution, the work covers animal industry in its various relations, chemistry of food, soil and soil products, entomology and meteorology. The weather forecast department is a most valuable feature, such storms as that which ruined Galveston being predicted days before they came. The collection and control of the splendid display of American produce last year at Paris and this year at Buffalo, are important incidents in the year's work, and the field is widening year by year, while the value of the work done increases in importance. We compliment the minister on his wide domain and the skill and care with which it is cultivated.

Mrs. Hewitt, wife of Rural Dean Hewitt, of Manitou, has succeeded in ripening nine oranges, the first example of the kind we have heard of in Manitoba.

James Westcott, Whitewood, Assa., Dec. 18, 1900: "Cannot get along without your valuable paper. Think you are making immense improvements in it every year."

The people of the United States consume, it is said, 200,000,000 bottles of pickles annually.

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Where the Little Babies Go.

I wonder, O I wonder, where the little faces go,
That come and smile and stay awhile,
and pass like flakes of snow—
The dear, wee baby faces that the world has never known,
But mothers hide, so tender-eyed, deep in their hearts alone.
I love to think that somewhere, in the country we call heaven,
The land most fair of everywhere will unto them be given.
A land of little faces—very little, very fair—
And every one shall know her own and cleave unto it there.
O grant it, loving Father, to the broken hearts that plead!
Thy way is best—yet O, to rest in perfect faith indeed!
To know that we shall find them, even them, the wee white dead,
At Thy right hand, in Thy bright land, by living waters led!

—British Weekly.

How Horrie Helped.

Fred Dallis had been in love with Nettie Grey for the past two years. Though brave enough in other things, in love he was timidity itself. He adored Nettie and more than twenty times he had tried to tell her so, and as many times utterly failed.

One night when he went to see her he found her trying to amuse her little four-year-old brother. After greeting Nettie, he took Horrie up in his arms who immediately assailed him with questions:

"Mr. Dallas, what makes it so light to-night?"

"Why, the moon is full."

"What is it full of?"

"Well," laughed Fred, "that's a poser; green cheese, I believe."

"Is it the new moon that is full?"

"Yes, it is the new moon that has got full."

"What was the matter with the old moon? was it all bowked up?"

"I suppose so."

"Mr. Dallas, I would like a moon."

"Would you; well, wait till you grow big and then you can have a honey-moon."

"Oh, my; is a honey-moon full of honey?"

"Yes."

"And do you have to get all bowked up to get one?"

"Yes," laughed Fred, "you have to get all broke up before you want one."

"Have you got one?"

"No."

"Tommy said you was all bowked up on Nettie, but that you hung fire; where did you hang the fire?"

"Horrie," said Nettie, desperately, "run away and ask Mary for a cookie."

"All yight, I'll get one pretty soon. Say, Mr. Dallas, didn't the fire burn you when you hunged it?"

"Yes, pretty badly."

"And don't you want a honey-moon?"

"Yes, if I can get some one to help me make one."

"Nettie will help you if you ask her; she always helps every one."

"All right, Horrie, you run and eat your cookies, and I'll ask Nettie," laughed Fred, his tongue loosed at last, and he made such good use of it that Nettie said she would have to consent, if only to keep him from crying for the moon.—Brownie.

C. J. Baragar, Elm Creek, Jan. 3, 1901:—"We all enjoy The Farmer, and consider it a credit to this western country."

How to Read.

Perhaps some people may wonder at the above heading, and resent it by asking, "Does this person think we do not know how to read? Does he think us so ignorant that we have not learnt our letters?" Yet there are many people who can spell the longest words in the dictionary without knowing how to read.

There are two ways of reading. One is to read everything that comes to hand without discrimination, without thought, and without remembrance. It has been said by a modern philosopher, "The best way to have no thoughts of one's own is to read those of other people." That is so, if we do not pause to think upon what we read. There are many people who go through a quantity of novels and a mass of light literature without getting any mental benefit. These are the people who do not know what to read; but there are others who are wiser in the choice of their literature, and read really good books, but who go from one to another so quickly and so carelessly that they, too, are not much the better for their reading. These are the people who do not know how to read. This is a maxim well worth remembering—"It is better to read a few books thoroughly than a lot of books carelessly."

A book can hardly be called good if it does not contain some passage, or at least some one sentence worthy of being treasured up in one's memory, and there

Couldn't Catch This Fellow.

"Well," said the red-faced man, "the most exciting chase I ever had happened a few years ago in Russia. One night, while sleighing about ten miles from my destination, I discovered to my intense horror that I was being followed by a pack of wolves. I fired blindly into the pack, killing one of the brutes, and, to my delight saw the others stop to devour it. After doing this, however, they still came on. I kept on repeating the dose, with the same result, and each occasion gave me an opportunity to whip up my horses. Finally, there was only one wolf left, yet on it came with its fierce eyes glaring in anticipation of a good, hot supper."

Here the man who had been sitting in the corner burst forth into a fit of laughter.

"Why, man, by your way of reckoning the last wolf must have had the rest of the pack inside it."

"Ah!" said the red-faced man, "now I remember it did wobble a bit!"

How often little children suffer from want of proper training at dinner time. I do not refer so much to their manners as to the food they leave uneaten. I would not suggest that children should be forced to eat what they strongly dislike, but that they should be trained by good cooking and by care on the mother's part to eat all that is wholesome. It is quite possible to bring up a child



Farm Home of S. Potter, Sprighill, Man.

are some books which are full of the choicest wisdom. How very much better it would be to become the possessor of these good things, to make them one's own, so to speak, rather than read them casually and pass them by for other books of little value.

Every reader who reads for instruction and improvement—and any other reading is mere idling—should always carry a pencil with him to mark any passage which may strike him as being worthy of thought and remembrance. The reader who has not yet tried this will be surprised at the manner the habit grows upon him when he once starts doing so. He will find it an additional source of pleasure in his reading, and the habit of searching for gems will help him to give a closer attention to his book and cultivate both his mind and his memory. Any sentence, paragraph, or poem thus marked should be copied into a general notebook, and if the reader has time should be learnt by heart.

A singular example of the vitality of disease germs has recently occurred in the United States. Eighteen years ago George Greely and wife, of Maple Rapids, Mich., lost their two boys by scarlet fever. Their clothing was packed away instead of being destroyed, or disinfected, until recently, when their nine-year-old daughter put on a suit of the clothes. She took the fever. The father is almost insane over the affair, and it has become necessary to place a guard over him.

to look forward to "dumpling day," and so rejoice when "rolly-poly pudding" is brought to the table, while it never dreams of meat without its proper proportion of fat. "I can't eat fat" is a cry that should not be heard at a table where the mother is both wise and firm. Nowadays cod liver oil is almost a necessity in many families, and mothers who have not brought up their children to eat suet and fat, on finding them ailing take them to the doctor, who promptly orders them cod liver oil, which has to take the place of the equally wholesome fat daily rejected by the ill-trained child. Let the fat and the suet be well and carefully cooked and teach your children to eat them.

The old lady took off her spectacles and wiped them contemplatively.

"Was you in here when Elvira read the piece she's a goin' to speak on graduation day?" she asked.

"Yes," replied her husband. "She knows a terrible sight, don't she?"

"I've heard 'er read 'er essay, an' I've heard 'er talk, an' I've seen the picters in the books she's studied, an' it's my opinion that Elvira knows everything that there is to be known—exceptin' how to make strawberry shortcake."

A London paper describes the khedive as the young monarch who rears poultry and horses, who speaks six languages, who is a musician, who has 100,000 pounds per annum, and who, though a Mohammedan, possesses but one wife.

Pleasures of Winter.

I am surprised to see people overlook it and think it a matter of congratulation that winter is going, or, if coming, is not likely to be a severe one. On the contrary, I put up a petition, annually, for as much snow, hail, frost or storm, of one kind or another, as the skies can possibly afford us. Surely everybody is aware of the divine pleasures which attend a winter fireside—candles at four o'clock, warm hearth-rugs, tea, a fair tea-maker, shutters closed, curtains flowing in ample draperies on the floor, while the wind and rain are raging audibly without.

"And at the doors and windows seem to call

As heaven and earth they would together melt;

Yet the least entrance find they none at all;

Whence sweeter grows our rest secure in massy hall."

All these are items in the description of a winter evening which must surely be familiar to everybody born in a high latitude. I am not "particular," as people say, whether it be snow, or black frost, or wind so strong that as (Mr. Anti-Slavery Clarkson says) "you may lean your back against it like a post." I can put up even with rain, provided that it rains cats and dogs; but something of the sort I must have, and if I have not, I think myself in a manner ill-used; for why am I called on to pay so heavily in winter, for coals, and candles, and various privations that will occur even to gentlemen, if I am not to have the article good of its kind.—Thomas De Quincey.

The question, "Why is spool cotton numbered as it is, and why are the figures not used in regular order?" is often asked, says the Boston Journal of Commerce. The explanation is this:—The numbers on the spools express the number of "hanks" which are required to wind a pound. The very finest spinning rarely exceeds three hundred hanks to the pound, while in the very coarsest there is about a half pound in each hank. The more common qualities, however, those from which sewing thread is usually made, run from ten to fifty hanks to the pound, and the spools on which it is wound are numbered from ten to fifty in accordance.

"As far as politics is concerned," said the man with high brow, "I prefer to hold aloof."

"Holding aloof is all right for them that likes it," said the man with the red neck, "but I prefer to hold a job."

A young man, hopeful of becoming the champion in that line, dived recently from a height 130 feet above the water. If there are not championships enough to go around, let us establish a championship of fools.

White-Metal.

Just what is wanted. Specially adapted to home machine repairing. Any man can use it with a ladle and a wood fire, and make the best boxes possible to have. Have good boxes, save labor, time, power and oil. Have machine to crowd to service—no heating up. Hardwares all sell. No other half as good as

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For the Boys.

Hints from a Self-Made Man.

There are boys, not very many of them, we fear, scattered here and there, all over this wide country who have worthy ambitions and aspirations, the fulfilment of which seems in their present condition almost impossible. They have no one like-minded with whom to talk of what lies nearest their hearts, very few books to read, and a very limited outlook for the future. We want to talk a little to such boys.

The writer has been there himself, and knows all about it. In the first place, the mere desire for such opportunities is often worth as much as the facilities which the boys you almost envy are favored with, but have no inclination to use. And as you go out into the world you will find that the advantages you had to struggle for, and generally use much self-denial to get at, are worth a great deal more in the battle of life than those that a well-to-do father or friends have provided for you. The working faculty, the determination to get on, and if possible to get up a step higher, and the habits of self-culture and self-reliance acquired in early life, have far greater real value in the battle of life than friendless boys have any idea of. In this country, more than any other, perhaps, the self-made man who began low down and steadily worked his way upwards, finds his best opportunities. Of course, though, as Daniel Webster says, there is always plenty of room at the top; it is only a few men in a generation that can get to the very top, yet there are great opportunities for usefulness and corresponding happiness in all the ordinary walks of life, and it is one of the very greatest mistakes you ever made to think that if you had had a chance some place else you could have done so much better, while where you are there is nothing worth holding on to and almost nothing worth striving for. You are most likely on a farm now or you would not be reading *The Nor-West Farmer*. Have you ever thought that a man who thoroughly studies the work on a farm, tries to be the most skilful workman, and aspires to a knowledge at some future opportunity of what such schools as the Agricultural Colleges of Ontario and Minnesota are calculated to furnish, is the kind of man that is bound to be more in demand in the near future than ever before.

It is of course possible that you may have in you special faculties that would be more valuable to yourself and the world you live in at some other place than on the farm, but it is a very great mistake to think that because the work you must now do is not just what you like, you may give it as little thought as possible and reserve all your interest and ambition for the thing in the future you have set your heart on. The writer of this was forced by sheer necessity to learn a business for which he had little aptitude and no liking. But looking back over it all, he does not regret it. Having begun, and seeing no way to get into the line he wished for, he determined to make the best of it and do everything as well as possible to which he put his hand, and that in its way brings one of the greatest pleasures in a workaday life. Thomas Carlyle says: "Do the work well that lies nearest your hand, and when that is well done the next will be easier to do." There is a story told of an English election 50 years ago, at which one of the candidates was a young English nobleman and the other a man who had once been a footman in his father's establishment. The lordling took occasion to hint that his rival had once been a menial in his father's castle, had, in fact, blacked the boots of the family. "I'm glad," was the retort, "that my opponent has referred to this. I know, and he knows, that I blacked those boots well. I have tried to do everything well since that I put my hand to, or I would not have been here to-day, and if you send me to par-

liament I shall try to do as well there as I have done everything else." That speech won the seat for him.

Speaking of elections reminds us of the case of one of the most interesting young men in the new English parliament, T. J. MacNamara, L.L. D., and member for one of the divisions of London. He is not yet 40 years of age, and began life in a country town little more than 20 years ago as a pupil teacher. He is now regarded as one of the very best authorities on educational methods, and yet he thought, when forced by circumstances to begin teaching that he would have been glad to try anything else rather than the drudgery of pupil teaching. This man who, more than most others, ought to be an authority on the matters whereof he speaks, said, when asked by a leading newspaper to give some hints from his own experience for the guidance of its younger readers:

"What advice can I give? First and last, let me urge you to use to the very utmost whatever opportunities come within your reach. There are more opportunities and greater encouragements for poor boys now than ever before. Every stroke of good work you put in now is a good investment at magnificent interest. The kind of work you do at the start will tell on your future success all through.

"Again, when you go out to work, avoid, as you would the plague, the no-

it again still more carefully? It was meant for you, and it will be your own loss if you don't read it with great profit.

In the Kitchen.

Stewed Celery.—Cut the celery into inch pieces, cover with boiling water, and cook in a covered stewpan until tender. It should simmer slowly until done. When cooked, add a pint of rich milk or cream, season to taste, and when boiling, thicken with a tablespoon of flour rubbed smooth in a little milk. Boil up once, stirring constantly, and serve.

Stewed Celery, No. 2.—Cook the celery as directed above and drain. Heat 1½ cups milk to boiling in a stewpan, then stir into it the beaten yolks of two eggs and half cup cream. Cook until it thickens, pour it over the celery and serve. A little nutmeg is nice to add to the seasoning.

Celery Fritters.—Mix 1 cupful finely chopped celery with 1 cup batter, drop the mixture, a tablespoon at a time, in boiling fat; when well browned drain, sprinkle with finely chopped parsley and serve at once.

Celery with Tomato Sauce.—Cut the celery into inch pieces and cook in boiling water until tender. Drain in a colander. For 3 cups stewed celery make a sauce with a pint of stewed or



Field of Rape on the farm of R. C. Neish, Cannington Manor, Assa.

tion that if your people had only made you something else what a genius you would have been. When I started as a pupil teacher, I thought for about a year after that there was nothing under the sun that I could not have done better. Anything but teaching. And I rather fancy there are lots of young people that dream as I did. Drop that at once and stick in heart and soul to the work on which you are engaged. Make the performance of the smallest duty a rehearsal of the parable of the talents—to your credit.

"A final word. Have a motto or two. Get off by heart some of the condensed wisdom of the past and apply it to your own case. I am an Irishman, and therefore emotional. When down-hearted, as most people sometimes are, I have thousands of times recalled the lines of Richard Monckton Miles:

"If what shone afar so grand
Turn to nothing in the hand,
On again! the virtue lies
In the struggle, not the prize."

The Farmer would like to give in every issue something worth reading and thinking over by the boys and girls on the farm. If you think it worth reading, write and tell us so, and if you have anything of your own to say, why send it in; we shall do it all justice.

By the way, did you read that paper on page 980 of our Christmas issue, by Principal McIntyre? If you have not, will you turn it up and read it carefully, and if you have read it, will you read

canned tomatoes, heated to boiling and thickened with a tablespoon of flour rubbed smooth in a little cold water. Add half cup hot cream or milk, season to taste, pour over the celery and serve.

Celery Vinegar.—Cut a bunch of celery very fine, and pour over it 1 quart hot, seasoned vinegar. Cover and let stand two weeks. This is very nice with oyster stew or with cold meats.

Minced Celery with Egg Dressing.—Scrape, wash and cut the celery in small bits. Rub the yolks of 2 hard-boiled eggs to a paste with 1 tablespoon salad oil, add salt and a little vinegar or lemon juice to mix. Pour over the celery and serve at once.

Celery and Potato Hash.—Chop fine 3 cups cold boiled potatoes and add 1 cup cooked celery, finely cut. Put in a saucepan with 1 small cup cream or rich milk, season to taste, cook until thoroughly heated, add a lump of butter and serve.

Stewed Celery on Toast.—Stew the celery as directed in preceding recipes, drain, season to taste, and mash to a pulp. Put a spoonful on a square of buttered toast, and pour over it a little cream sauce. This is a nice breakfast dish.

Celery Ramequins.—Boil 2 ounces bread in 1 gill of milk. When smooth, add 4 tablespoons grated celery and 2 tablespoons butter. When heated, remove from fire, add the beaten yolks of 2 eggs, season to taste and stir in

A PURE GRAPE CREAM OF TARTAR POWDER

DR. PRICE'S CREAM BAKING POWDER

Highest Honors, World's Fair
Gold Medal, Midwinter Fair

Avoid Baking Powders containing
alum. They are injurious to health

gently the stiffly whipped whites. Bake in a hot oven for 15 minutes.

Celery Salad.—Cut the celery in small pieces, season to taste, pour over olive oil and lemon juice, in the proportion of 2 tablespoons lemon juice to 1 of oil. They must be thoroughly beaten together before pouring on the salad. Only the most tender and crisp celery should be used in a salad.

Ways of Cooking Chicken.

Chicken Souffle.—Mince and pound very fine two cups of cooked chicken, add yolks of three eggs, salt and pepper to taste. Melt two tablespoonfuls of butter, and stir into it one tablespoonful of flour, adding gradually, one cup sweet milk, pour on mixture, add whites of three eggs whipped, and bake one-half hour in dish set in hot water.

A Modern Fry.—Parboil chicken fifteen minutes, sprinkle with salt and let cool. Make a batter by beating light the yolks of two eggs, with half a saltspoonful of salt, stirring in gradually one tablespoonful of oil, adding one cupful of flour, and lastly one cupful of cold water. Set batter away an hour, and prepare the vegetables. Chop very fine one small onion, three sprigs of parsley and two tomatoes, with seeds left out. Stir into batter, and add last whipped whites of two eggs. Dip each piece of chicken in batter and fry slowly in a spider in butter. A nice accompaniment for plain, fried chicken is supplied by hominy balls, and tiny slices of crisp bacon, alternating around the edge of the platter.

Chicken Escallop.—Use remnants of cooked chicken, picked fine. Heat two cups of milk, in which you have thrown a bay leaf, a dash of celery salt and three drops of olive oil. Melt two tablespoonfuls of butter, and stir into it three tablespoonfuls of flour, when it thickens, but before it browns, add milk. When thick and smooth, take from fire. Butter baking dish, and put in thin layer of crumbs, then chicken, then white sauce, alternating until dish is filled. Sprinkle crumbs on top and bake one half-hour.

A Nice Breakfast Dish.—Take one cup of soft boiled rice, add one cup of finely minced chicken, sprig of parsley, minced, season well with salt and pepper. Form into small round cakes, dip in beaten egg and crumbs. Brown in spider in butter. Arrange on hot platter and pour over the following sauce: Half a can of tomatoes, stewed with one teaspoonful salt, and lump sugar, one saltspoonful mixed spices, strain. Add one tablespoonful of butter, mixed with one tablespoonful of flour, cook five minutes and serve very hot.

True wealth, according to Carlyle, consists in the abundance, not of the things which you possess, but of those in which you take an interest.

What an Immigrant Hears.

The immigrant has just arrived
And on the platform stands;
With sacks and grips encircling him
And others in his hands.

And as he looks among the crowd,
With eager, anxious glance,
The "landsharks" see his helpless state
And on him they advance.

Without delay he's briefly told
That he must starve or beg;
Or settle on the vacant lands
Surrounding Winnipeg.

His pockets filled with endless lists
And maps to turn his brain,
He makes a desperate rush at last
And boards the south bound train.

In language not so classic quite
As Virgil or of Horace,
He's told about the lovely land
There is not far from Morris.

He's read about the heavenly homes
Beyond the river Jordan,
But now he hears they're not so good
As those just close to Morden.

And yet proceeding on his way
The country still to view,
He learns the centre of the earth
Is close to Manitou.

And further west he's simply told,
That if he will remain,
He must become a millionaire
Right there at Deloraine.

But stubborn still he has not found
A place he thinks will suit,
So starting out again to hunt
He takes another route.

And captured by a granger bold,
Who says, "If you mean farmin',
You must be mad or drunk or both,
If you don't stop at Carman."

At Glenboro and Holland, too,
He spent some little time;
But what he heard we cannot tell,
The words won't suit this rhyme.

And now upon the C. P. R.,
The Main line going west,
He'll doubtless hear of many towns
That discount all the rest.

And what he heard no doubt is true,
But still the fact remains,
Thrt on the earth there is no spot
Just like the Portage Plains.

And yet to get a farm, he's told,
Which he will not abandon,
Must be within a "radius line"
Of twenty miles of Brandon.

And if perchance he still is free
A choice of home to make,
Another heaven-on-earth is found
At the city of Oak Lake.

Then at a station west they say,
"You'll find your life a burden,
Unless you have the sense to choose
A homestead close to Virden."

And at another paradise
They try to rope him in;
And on the platform he will hear
The charms of Moosomin.

Oh! then that Eden of this earth
Of which the landsharks tell,
Is that lovely parklike country,
In the valley of Qu'Appelle.

And now suppose a choice is made
From all this tempting bill,
He yet will often hear that there
Was something better still.

Some zealous friend will say to him,
"It really is a pity,
You chose your place before you took
A look at Rapid City."

But what's the odds? for he will say,
"I made a grand selection,
The garden of the universe
Is right upon my section."

—W. A. T.

E. H. Grove

This signature is on every box of the genuine
Laxative Bromo-Quinine Tablets
the remedy that cures a cold in one day

A Flourishing Institution.

Over twenty-one years ago the Canadian Order of Foresters began doing business in the Province of Ontario, and in later years it has been enlarging its operations until now it has branches in every province in the Dominion, having at the present time upwards of 40,000 members. During those years upwards of \$2,225,000 has been paid to the members and their dependents, and at the end of November last it had over \$966,000 of a reserve fund in its insurance department. The fees payable by policy-holders, from which this surplus has been saved, after paying all death claims, are as follows, payable monthly in advance:—

Between the ages of	On \$500	On \$1000	On \$1500	On \$2000
18 to 25 . . .	35c	60c	90c	\$1.20
25 to 30 . . .	40c	65c	98c	\$1.30
30 to 35 . . .	45c	70c	\$1.05	\$1.40
35 to 40 . . .	50c	85c	\$1.28	\$1.70
40 to 45 . . .	55c	\$1.00	\$1.50	\$2.00

All the money received from the monthly insurance fees is placed into the Insurance Fund, and no portion of this fund or the interest accruing therefrom can be used for any purpose whatever other than the liquidation of death claim certificates. Not a fraction can be used for managing expenses.

The surplus funds are all invested in the Dominion of Canada in the best class of securities, or on deposit in the best monetary institutions in Canada.

The operations of the society being confined to Canada, the death rate is very low, being for 1899 only 4.43 per 1,000 of the membership, and the average death rate since the organization of the society only 4.92 per annum per 1,000 of the membership.

A Sick and Funeral Benefit Department is also conducted by the Order, which is an optional feature, in which upwards of 22,000 of the members are enrolled. The benefits are \$3.00 per week for the first two weeks' illness, and \$5.00 per week for the following ten weeks, altogether \$56.00 in any one year, and a funeral benefit of \$30.00. In case of continued illness \$56.00 is paid each year.

The fees for same payable monthly in advance, are as follows:—

Between 18 and 25 years	25 cents
Between 25 and 30 years	30 cents
Between 30 and 35 years	35 cents
Between 35 and 40 years	40 cents
Between 40 and 45 years	45 cents

All physically and morally qualified males between 18 and 45 years of age, who are not debarred on account of occupation, are accepted for membership.

For further information enquire of any of the officers or members of the Order, or address,

THOS. WHITE,
High Secretary, Brantford, Ont.
R. ELLIOTT,
H. C. R., Ingersoll, Ont.
ERNEST GARTUNG,
Brantford, Ont.
A. P. VAN SOMEREN,
D. H. C. R., Souris, Man.
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These Four New Preparations comprise a complete treatment for all Throat and Lung troubles, also a Positive Cure for Consumption.

The Food-emulsion is needed by some, the Tonic by others, the Expectorant by others, the Jelly by others still, and all four, or any three, or two, or any one, may be used singly or in combination, according to the exigencies of the case. Full instructions with each set of four free remedies, represented in this illustration.



This is a Positive Cure for all Throat and Lung Troubles, also CONSUMPTION

THESE FOUR REMEDIES

Represent a **New** system of medicinal treatment for the **weak**, and those suffering from **wasting** diseases, **weak lungs**, **coughs**, **sore throat**, **catarrh**, **consumption**, and other **pulmonary troubles**, or inflammatory conditions of **nose**, **throat** and **lungs**.

The treatment is **free**. You have only to write to obtain it. By the system devised by DR. T. A. SLOCUM, the specialist in pulmonary and kindred diseases, the needs of the sick body can be condensed into his treatment by four distinct preparations.

Whatever your disease, **one** or **more** of these four remedies will be of benefit to you.

According to the exigencies of your case, fully explained in the treatise given free with the free medicines, you may take **one**, or any **two**, or **three**, or **all four**, in combination.

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HUDSON'S BAY STORES

Piri and Noko.

(A Maori Fairy Tale.)

I was visiting the gray-haired old Chief Kaiteiteri, and we were sitting in the twilight in front of his house talking, when my little daughter Ettie, who was sitting on my knee, suddenly exclaimed:

"Oh, papa, I can see two such dear little stars quite close together — see, just over the top of the mountain there."

Then, addressing himself principally to Ettie, he told the following story, which I have set down as nearly as possible in his own words:

"A long time ago there were two little children—Piri and her brother Noko. Their father loved them and never said a cross word to them; their mother loved them, too, but she had a sharp tongue and was forever scolding them. Often they would be seen sitting together by the side of some boiling spring cooking the little fish they had caught; and, as they were never seen apart, the people called them 'the inseparables.'"

"One evening, when the moon was bright, their mother took her flaxen net and went down to the beach to catch some fish. Piri and Noko saw her going and called out from inside the house: 'Oh, mother, we are so hungry; do let us have some fish when you come back.'"

"Go to bed, naughty children," she said, looking round; 'you've had nothing to do all day but dig for sweet potatoes, and hunt for cockles, and now you're hungry. Go to bed, naughty children.'"

"But they were very hungry, and cried to her again to give them some fish when she came home."

"Perhaps I will and perhaps I won't," she called back harshly, 'go to bed.'"

"She went to the beach and caught a few fish, but not very good ones. Soon after midnight she saw something thrown up by the waves on the beach, and left her fishing to see what it was."

"Ah," she cried in delight; 'here's some supper for us.' It was a long, flat frost-fish — a great delicacy which is often thrown up alive on these beaches in cold weather."

"She lost no time in dragging it home, and it was very soon cooking on the hot stove where the fire had been. When it was ready she waked her husband, and they sat down to eat."

"Shall we wake the children and give them some?" he said, when he tasted how nice it was."

"I should think not," she replied; 'the little brats have been eating all day, and they're always pretending to be hungry. Besides, I won't have them waked out of their sleep.'"

"Very well," he said, 'I will put by a piece of mine, and they can have it in the morning.' And he cut off the best part and put it back in the basket."

"Now, the children were not asleep, and they heard all this. They had remained awake thinking they would get some fish, and now that they smelt the savory smell and heard their mother's harsh words they wept silently upon their mat in the corner."

"At last, when their parents had finished their meal and gone to sleep, Piri whispered to her brother: 'Noko, I don't believe mother loves us a bit.'"

"No, but father does," replied her brother."

"Yes, but he's never at home; he's always away fighting. Let's run away, Noko; mother doesn't want us."

"Noko objected at first, but Piri went on to persuade him. 'I heard the tohunga (priest) say there was a beautiful land far away which could only be found when everyone was asleep. Let us go and look for it—everyone is asleep now.'"

"At last Noko agreed, and, hand in hand, they stole out through the doorway and set forth in the night to find this beautiful land they had heard about."

"Let us go to those lovely deep pools in the rocks," said Piri; 'perhaps we shall find the way there.'"

"So they went and gazed down into the clear water, but they could see no way through to the distant land. Then hungry, tired and very unhappy, they sat down beneath a palm tree side by side and cried till their tears ran down like rain and formed little pools in the hollows of the rock on which they were sitting. As Piri wept with her head in her hands she saw the stars reflected in her pool of tears and drew Noko towards it to look too."

"Those are the eyes of Great Chiefs," she said, for they both knew it was the reflection of the stars above them. 'Wouldn't you like to be up there, Noko?'"

"Yes; the Great Chiefs would not scold us, would they? And we shouldn't be trouble to mother if we could go up there, would we, Piri?'"

"Look, Noko!—they were gazing up at the sky now—'Look at all those little baby stars. They're not all Chiefs—there are a great many children there; why can't we go up, too?'"

"Noko liked the idea of living up among the Great Chiefs better than running away and hiding, so he caught hold of his sister's hand very tightly, and said, 'We'll do it, Piri; we'll go up there and ask the Chiefs to take care of us.'"

"We must keep close together," said Piri; 'I'm not going if we're to be separated.'"

"Very well; catch hold of my waist-belt tight, and hold on."

"Saying these words, Noko leapt up towards the sky, Piri holding fast by his girdle. Up and up they went through the night, growing smaller and smaller in the distance, until at last the Great Chiefs saw them, and changed them into two little twin stars set close together in the sky."

"When the mother and father awoke in the early morning, they went to the corner where the children used to sleep to wake them. But they were gone, and the mat was all wet with their tears."

"They looked at one another, and the mother said, 'They have run away because I spoke crossly to them.' Then she rocked herself to and fro in her grief, moaning and crying, for she loved her children after all."

"Let us go and search for them," the father said; 'they cannot have gone far.'"

"So they went out together and searched everywhere — in the bush, among the rocks, and on the sea shore: but they could not find the children, and at sunset came home very sad and tired. The sun went down and the stars began to come out one by one while the father stood silent and sorrowful in the doorway, and the mother, within the house, sat on the ground, with her mat over her head, swaying her body to and fro and singing a mournful lament for her lost children."

"Suddenly the father, who had been looking up into the western sky, cried out in a glad voice. 'There they are! I see them!'"

"The mother came running out at his cry, and together they saw their two children standing hand in hand far away in the sides of the sky—the two little stars that had not been there before."

"Let us follow them," said the mother, and together they rose into the deepening twilight and fled after their children."

"But Piri and Noko, far off in the sky, saw their parents coming, and thinking they were angry, sped away towards the western horizon. The parents followed, and when they reached the highway of Tane, that god of Light changed them into stars. And now, when the night is clear, you may see two little twin stars flying away towards the west, and some distance behind two larger stars in vain pursuit. Thus for ever they go round and round the world, Piri and Noko running away from their parents because they were so foolish as to think their mother did not love them."—Cassell's Little Folks.

W. L. McKenzie, Balmoral, Man.:—"I like The Farmer well. I consider my subscription the best investment I ever made."

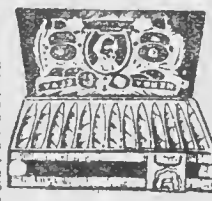
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Would not look a bit better than the one we offer you, absolutely free, on your first order for our Cigars. This Watch has a very fine jeweled movement in a heavily gold plated hunting case, beautifully engraved. We can supply it in either Lady's or Gent's size, and in open face if desired. We don't want you to pay a cent till you are thoroughly satisfied that the Watch is exactly as we represent it. Just send us the name of your nearest express office and we will ship the Watch and a box of 50 Cigars there for your examination. Examine Watch and Cigars thoroughly and if you are entirely satisfied, pay the express agent our special price, \$4.65 and express charges. If you are not satisfied, the goods come back at our expense and you pay nothing. This offer is good for first orders only, to induce you to try our Cigars, and become a regular customer. Send us a post card to-day.



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Thorold Cement.



Barn of Archie Crozier, Beachburg, Ont. Size of wall 45 x 120 ft. Wall, Cistern and floor built with Thorold Cement.

The holes showing along the top of the wall are for ventilation.

Read what Archie Crozier says about Thorold Cement.

ESTATE OF JOHN BATTLE, Manufacturers Thorold Cement, Thorold, Ont. Beachburg, Ont., Aug. 14, 1900.

GENTLEMEN: It is with much pleasure that I testify to the good quality of your Thorold Cement for building purposes. I have just completed a Basement Wall, Cistern and Floor throughout the entire building. Size of wall is 45 x 120 ft., 8 ft. above floor, and a 2-ft. footing. 12-in wall above footing. I also put in door-sills and window-sills of cement. I used 280 bbls. of cement in the whole job. I consider it a cheaper and better job than either brick or stone, and furthermore, I have saved by building with cement, 2,900 cubic ft. of space over and above what I would have had if built with stone. Therefore I give credit to the Cement for \$160 on space. The work was under the direction of your man, Mr. Geo. W. Reid, who understands his work well. I do highly recommend your Thorold Cement to any person intending to build any kind of buildings, for strength, durability and extra space.

I mail you a photo. of our basement wall, and am sure you will be pleased with its appearance, for every person that sees it, either from Western Canada or any other place, says they never saw its equal for appearance, or from an architectural point of view. ARCHIE CROZIER. Breeder of Shorthorn Cattle, Yorkshire and Berkshire Pigs, and Leicester Sheep.

Correspondence Solicited.

FOR FREE PAMPHLET WITH FULL PARTICULARS, ADDRESS—

ESTATE OF JOHN BATTLE THOROLD, ONT.

LOOK FREE



The Bracelets are made in the popular curb link and exquisitely finished in Silver or Gold, whichever you desire. Cut out this advertisement, and mail it to us with your name and address, and we will send you the Pins. Sell them, return the money, and we will send you Bracelet, carefully packed, free. EMPIRE NOVELTY CO., Box 1105 Toronto.

FREE!

We give this splendid Air Rifle for selling only 24 dozen Gold Topped Collar Buttons at 10c. each. Our agents find these Buttons very easy to sell. Everybody uses them and any bright boy can earn a Rifle in an hour's time by going to work at once. Mail this advertisement and we send you the buttons. Sell them, return the money, and we will forward, prepaid, this all-steel Air Rifle, the very best make. It has Globe sights, Pistol Grip and Walnut Stock. Shoots B.B. shot, darts or slugs with force and accuracy. Unequalled for bird shooting, or target practice. Each Rifle is carefully tested before leaving the factory. Write to-day LEVER BUTTON CO., Box 1103, Toronto.

Hints on Cooking Vegetables.

Remember, first, to have them fresh as possible. Summer vegetables should be cooked on the same day they are gathered. Second, look them over and wash well, cutting out all decayed or unripe parts. Third, lay them, when peeled, in cold water for some time before using. Fourth, always let water boil before putting them in, and continue to boil until done.

Turnips—Should be peeled and boiled from forty minutes to an hour.

Beets—Boil from one to two hours; then put in cold water and skin off.

Spinach—Boil twenty minutes.

Parsnips—Boil from twenty to thirty minutes.

Onions—Best boiled in two or three waters, adding milk with flour thickening the last time.

String Beans—Should be boiled one hour.

Shell Beans—Require one half to one hour.

Green Corn—Boil 20 to 30 minutes.

Green Peas—Should be boiled in as little water as possible; boil twenty minutes.

Asparagus—Same as peas; serve on toast with cream gravy.

Squash—Cut in pieces and boil twenty to forty minutes in small quantity of water; when done press water out, mash smooth, season with butter, pepper and salt.

Cabbage—Should be boiled from one half to one hour in plenty of water; salt while boiling.


Thanksgiving Cake.—Mix together over night 3 lbs. flour, 1½ lbs. sugar and 1 teaspoon each of powdered cloves, mace and ginger. Sift all through a sieve and stir in four table-spoons yeast. Whisk a dozen eggs very light and add, with a little milk. Set to rise. In the morning knead in 1 lb. of butter and 2 teaspoons salt and sprinkle 2 lbs. stoned raisins through the paste. Use sufficient flour to make a soft dough; turn into a cake mold and bake in a moderate oven. Do not remove from the pan until cold.

Thanksgiving Pudding.—Soak 1 pint cracker crumbs in 3 pints milk for half hour. Wash 2 cups seedless raisins and boil in enough water to cover while crumbs are soaking. Mix half cup sugar, 1 teaspoon salt, half teaspoon cinnamon, half teaspoon nutmeg and add 3 teaspoons butter; beat until creamy. Beat in 6 eggs, one at a time, and stir this into the milk into which the raisins have been stirred without the water in which they were covered. Butter a deep pudding dish thick with cold butter, turn in the pudding and cover it. Bake 3 hours in moderate oven, removing the cover the last hour to brown it, and during the first hour stir up the pudding from the bottom to keep the raisins on top. Serve with a hard sauce.

ROYAL

DRY HOP

YEAST CAKES



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TORONTO, ONT.

MORE HOME KNITTERS WANTED.



We want a few more workers in this locality, at once, and in order to secure your co-operation without the delay of correspondence, we herewith explain our full plan in this advertisement. The work is simple and the Machine is easily operated, and with the Guide requires no teacher. If you wish to join our staff of Workers let us hear from you promptly with the Application Form for Stock and Machine filled out and remittance, and we will allot you Stock and send you machine outfit to begin work at once.

THE PEOPLE'S KNITTING SYNDICATE

Incorporated by Provincial Charter under the Ontario Companies Act. **LIMITED.**
Authorized Capital Stock, - - \$180,000
HEAD OFFICE, - TORONTO, CANADA

The Syndicate is Offering a limited amount of Stock at \$1.00 per share in lots of twenty shares. (Each subscriber of the twenty shares to be furnished a twenty-dollar knitting machine free to work for the Syndicate and to share in the net profits of all goods made.)

The Syndicate has been formed for the purpose of manufacturing knitted goods cheaper than any existing company, to keep down prices, and to oppose the large knitting Combines and Companies which have joined hands to raise prices. To do this successfully it is necessary to get yarn at first cost and to manufacture goods with the least possible expense. Therefore—

1. The Syndicate supplies its own yarn and machines.
2. The Syndicate has all goods made by shareholders knitting at their own homes.
3. The Syndicate pays for all properly made goods at once upon receipt of same, and besides paying for the work when sent in will semi-annually divide with its working shareholders the net profits from the sale of all goods made by its shareholders.
4. The Syndicate sells all goods made by its working shareholders.
5. To each subscriber of twenty \$1.00 shares the Syndicate gives free a twenty dollar Knitting Machine to keep, and also supplies each working shareholder, free of charge, full directions, samples and yarn to make the goods.

To become a shareholder, a worker, the owner of one of the machines, to be paid for the work you do, and also to participate in the equal division of the net profits, you have only to become a member of the Syndicate and take twenty \$1.00 shares which will cost you twenty dollars.

THE METHOD OF THE SYNDICATE Is to supply its own yarns and knitting machines to its shareholders, FREE. By this plan it can readily be seen that the Syndicate not only benefits its shareholders by way of dividends, but is the source of a regular employment and income at their homes. The Syndicate is fully prepared to keep its shareholders supplied with yarns for doing the various kinds of work required, and it is also in a position to dispose of all goods knitted from these yarns through large jobbers and to the general trade as fast as it can be sent in by its shareholders.

It will be seen that to manufacture goods on so large a scale it would be necessary to have a number of knitting factories, which would mean the investment of thousands of dollars, besides taxes, insurance and interest on same. We can, therefore, not only manufacture goods cheaper and in larger quantities, but pay our shareholders dividends semi-annually.

THE MACHINE the Syndicate furnishes is a high speed familyseamless knitting machine, and will last a lifetime with ordinary usage. In fact the Syndicate will guarantee the machine for twenty years. It will knit from the finest of imported yarns to the coarsest of Canadian wool yarn the same as hand work, but eighty times faster. In fact a pair of socks or bicycle hose in twenty minutes. With each machine a full outfit is sent together with a supply of yarn to commence at once. The guide accompanying the machines is so plain and the operation so simple that anyone of ordinary intelligence can make any of the knitted goods required by the Syndicate, such as Gents' Socks, Ladies' Stockings, Golf and Bicycle Hose, Knickers, Leggings, and Toques for Children.

THE PRICES the Syndicate pays for knitting these goods are:—Socks, \$5.00 per 100 pairs; Ladies' Stockings, \$10.00 per 100 pairs; Gents' Golf and Bicycle Hose complete, \$10.00 per 100 pairs; Leggings and Footless Bicycle Hose, \$5.00 per 100 pairs; fine Toques, \$5.00 per 100. All these goods are quickly made on the machine and at these prices any person willing to work can make good pay, much more than clerking in store, working in shop or laboring on farm. Shareholders can devote all or part of their time knitting, but at all times they are expected to work for the interests of the Syndicate.

WHO CAN JOIN. All persons willing to accept and honestly knit the yarn entrusted to them, and to return made goods promptly to the Syndicate.

WHAT YOU MUST DO TO JOIN. Each person desiring to become a shareholder of stock, participating in the semi-annual dividends, and to do work for the Syndicate, receiving pay as fast as the work is sent in.—must cut out the following APPLICATION FORM, sign their name to it, fill in address and reference, and enclose it with Express or Post Office Money Order to the Syndicate.

Application Form for Stock and Machine.

THE PEOPLES KNITTING SYNDICATE, LIMITED,
130 YONGE ST., TORONTO, ONT.

I enclose you herewith \$20.00 in FULL PAYMENT for 20 shares of stock (subject to no other call) in The People's Knitting Syndicate, Limited, which I wish allotted to me, and one of your \$20.00 machines free, same as you furnish your shareholders, together with free samples, instructions and yarn, which I wish sent to me as soon as possible to enable me to begin work for the Syndicate at once upon receipt of same. The said stock to entitle me to participate in the semi-annual dividends of the Syndicate in addition to being paid cash on delivery for all the Knitting I do for the Syndicate on my machine.

Name your nearest Express Office: _____ Your name _____

Post Office _____

Mention The Nor-West Farmer Name Reference, Mr. _____

(Please state how much time you can devote to the work and how you wish to be paid—weekly, monthly or as you send in the work.)

How to Carve the Turkey.

1. Insert the carving fork across the middle of the breastbone.
2. Cut through the skin between the breast and the thigh.
3. Bend the leg over, and cut off close to the body and through the joint.
4. Cut through the top of the shoulder down the wing joint.
5. Shave off the breast in thin slices, slanting from the front of the breast-bone down toward the wing joint.
6. Carve only from the side nearest you.
7. Tip the bird over slightly and with the point of the knife remove the oyster and the small dark portion found on the side bone.
8. Then remove the fork from the breast and divide the leg and wing.
9. Cut through the skin between the body and breast, and with a spoon remove a portion of the stuffing.
10. Serve light or dark meat and stuffing, as preferred.

T. J. Pearson, Rose Hill, Whitewood, N. W. T.:—"The Xmas number of your paper is a marvel of information for the farming community, and it seems as if you were also studying the hard times the farmers are baying by giving them an extra quantity for their money. My wife and myself are looking for the days we expect The Farmer."

W. D. Cole, Napinka, Man., Dec. 28, 1900: "In renewing my subscription to The Nor-West Farmer, I cannot allow the opportunity to pass without telling you how much I appreciate the improvement that is so marked from year to year until it has taken the foremost place as an agricultural journal, and more particularly so in the adaptability of its articles to the farmers of the North-west and Manitoba."

The Life of a Grasshopper.

By Mary Rogers Miller, Instructor in Nature Study, Cornell University.

Walking in the tall grass of a meadow or country roadside or even along the border of a city street one is almost sure to disturb and set in motion dozens of long-legged, short-horned locusts or grasshoppers. If they did not jump and turn summersaults like circus performers we should hardly discover them so well protected are they by the stems and leaves among which they live. They disappear so suddenly on alighting that it is difficult to see what they are like. Close watching will discover that they are of various sizes and colors, but are alike in having enormous hind legs. No wonder they can jump! If one is held between thumb and fingers he will struggle manfully, using the hind legs as levers and pushing with all his might to get free.

Every neighboring weed patch, vacant lot or friendly backyard will furnish locusts enough to keep nature students busy and delighted through many hours, and the hoppers will fare just as well or even better than when they had to shift for themselves.

Take a flower-pot, six inches or so in diameter, and plant in it a small piece of sod. Get a glass lantern globe of a size to set just inside the rim of the flower pot. Now tie over the top of the globe some very thin muslin or fine wire gauze and you have a cage in which grasshoppers or crickets can be kept in sitting room or school room all through the drowsy summer days. It will not be hard to get the flower pot, the globe and the muslin, but if one is to get any fun out of watching grasshoppers he must have the patience to pursue and the courage to handle them. When a dozen locusts of assorted sizes are safely housed the student may well heave a sigh of relief and self-congratulation. It is very important that several of the smaller insects be obtained for the transformations which take place during their development are most fascinating.

When the young locust hatches from the egg he creeps up out of the earth where his mother had so carefully hidden her eggs months before, and looks about. He finds himself a real grasshopper, but such a fuzzy, big-headed baby, looking very much as if he were bewildered and sorry he came and wished he could crawl back again. As he feels the warm sunlight on his little tender back, his courage increases. He tries his legs and finds that "he only has to steer them, and they ride him everywhere." A grass blade tickles him under the chin and all at once he is hungry and eats. His appetite grows and grows. It becomes his most prominent characteristic and goes with him through life.

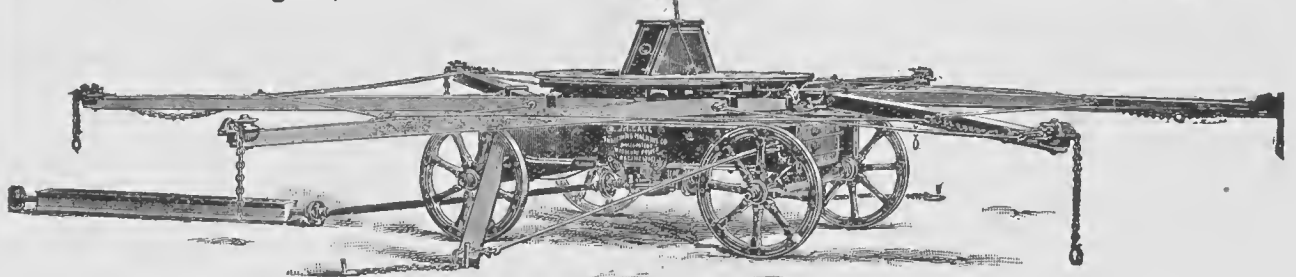
As he eats he grows and his skin gets hard. Pretty soon he finds himself in what seems to us a sad predicament. His skin is too tight. When a boy's clothes are too small he has a new suit and his little brother takes the old ones. There is no such exchange of courtesies and garments in the grasshopper world. We know how it feels to wear a coat that is much too small. It is uncomfortable. We want to hide away from the others and be miserable. So does the little grasshopper. He doesn't know where his next suit of clothes is to come from. He has been too busy eating to think of the future. He hides away under a grass blade moping and uncomfortable. Suddenly he begins to feel freer but weak. He can only squirm feebly, and blindly push and wriggle this way and that. He lifts his head and it feels light and cool as if he had his hair cut very, very short. Then the awful weakness comes again. Woe unto our little grasshopper if a toad or insect-eating bird comes along while he is in this sorry plight. After a while he wakes and rubs his back gingerly with his hind leg, finds that he is all there, forgets everything else and falls to eating. On the grass blade where he clung so

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Engines and Separators.

long and so helplessly there is a bit of something, fragile and almost transparent but hollow. There are the six legs, the large eyes and the little body, all empty. The grasshopper is away leaping in the sunlight or running races with dew-drops along grass-blades, while his cast-off clothes are waiting in a forlorn little heap which the first falling twig or dash of rain will scatter. Some thrifty ant may pick up a detached leg but will abandon it when she finds it empty.

The young grasshopper does not know that he has moulted, and passed into the second stage of his nymph-hood. The growth of grass-hoppers is by successive moults in their immature or nymph stage. They are said to have an incomplete metamorphosis. That is, they do not have four distinct changes of form, the egg, the larva, the pupa and the adult, but only three, namely: egg, nymph, and adult. Butterflies, moths, bees and flies all have four changes of form, while grasshoppers, crickets, dragon flies and katy-dids have only three.

If a young grasshopper were to examine his new skin after the third moult he would discover that he had reached the age when pockets are provided for him. He has four of these, and they are "back pockets." If he were to try his best, however, he could find no way to put anything into them, for they are more like shams than like real pockets. We call them wings, but they look as little like wings as like pockets. The grasshopper pays no attention to them whatever and we never see him trying to make them go. His legs can leap higher than ever and it is almost like flying when he can throw his body through the air a distance fif-

ty time as long as he is. Probably most of the nymphs found at this season will be in the last or next to the last stage, and the transformation from the nymph to the adult stage can be watched through the glass. One who has seen this transformation and realized its meaning will not soon forget the experience.

How a grasshopper gets the main part of his living we can easily see by watching a grass blade disappear behind his four hungry jaws. How he takes care of himself, how he breathes and sees and hears—these are not so obvious.

Examine the head for any trace of nostrils for breathing. There are none. We must look elsewhere. Over and over we turn him seeking for the breathing holes and find them at last along the sides of the body, two on each little ring or segment. They are not on the head at all.

That grasshoppers can see and hear is quite evident, for they lose no time in getting out of the way at the approach of danger. The eyes cover a large part of the head and are very unlike the eyes of human beings. Nothing short of a microscope will tell us the marvellous story of the insect's eye. It is a compound eye, made up of thousands of tiny six-sided eyes. When we look for the ears we must not expect to find large flapping ones like an elephant's, nor pointed ones like the cat's. The locust has a very perfect ear-drum, but no external ear properly speaking. On some grasshoppers one should look under the wings just back of where they are joined to the body for these small oval ear-drums. Some of the large green grasshoppers have them conveniently situated on their front legs. Fancy hearing with one's elbows!

If the student is fortunate enough to secure some of the musical members of the grasshopper family, there will be cause for great rejoicing in the school room. An insect concert is a very enjoyable affair, especially if one is near enough to see how the music is made. At the approach of the cold weather the grasshoppers become fewer and fewer until no more are seen. Tucked away in innumerable little earth cells along the roadside or in dry meadows are the eggs which will produce next year's supply of hoppers. Their life cycle or generation is but one year long, and the old hoppers are all gone by the time snow falls. Next year will have its own story to tell.

Jas. M. Ehy & Son, Prospect Hill Farm, Saskatoon, Sask., Dec. 28, 1900:—"We are afraid that you will be raising the price of The Nor'-West Farmer if you improve it much more. We consider it a necessity."

E. Blackburn, Strathclair, Man., Dec. 31, 1900:—"I let my subscription to your fine paper run out this month and I missed the Christmas number. Life since then has been a burden. I promise never to do it again as long as I have a dollar. Send along the Christmas number and make the first dawn of the new century bright."

Knowledge and Wisdom.

Knowledge and wisdom, far from being one,
Have oftentimes no connection. Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge—a rude, unprofitable mass,
The more materials with which Wisdom builds,
Till smoothed, and squared, and fitted to its place—
Does but encumber whom it seems to enrich.
Knowledge is proud that he has learned so much;
Wisdom is humble that he knows no more.

—Cowper.

Make Life Miserable.

It's the Little Things That Do So.

How frequently you hear people complain of "only a slight case of piles," often claiming that the trouble is merely temporary, induced by costiveness, or sedentary habits.

It may be some satisfaction to console yourself in this way, but it is much better to check the trouble at once. You can't do it too soon.

In time these little rectal tumors will grow from the size of a grape seed, until a knot of them results as large as pigeon's eggs.

These become inflamed and tender to the touch and causing itching, stinging and throbbing pain.

Thus the disease continues from bad to worse until the patient can bear the annoyance no longer.

The Pyramid Pile Cure is a perfectly safe and certain cure for piles in any of these stages. It goes to the very source of the trouble and drives out all inflammation, causing the tumors to subside and the membranes to resume their normal, healthy condition.

Piles lead to too many complications to trifle with every remedy that comes along. People have found it pays to use a standard remedy like the Pyramid Pile Cure which for ten years has been tested in thousands of cases.

Physicians use the Pyramid Pile Cure in preference to surgical operations, because they know it contains no cocaine, morphine or poisonous drug and because it is no longer an experiment.

The Pyramid Pile Cure is in suppository form to be used at night and causes no detention from business, is painless and costs but 50 cents at any drug store in the United States and Canada.

TO CURE A COLD IN ONE DAY.

Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. 25c. E. W. Grove's signature is on each box.

NOT COD-LIVER OIL

but Scott's emulsion of cod-liver oil. They are not the same; far from it.

Scott's emulsion is cod-liver oil prepared for the stomach.

Let cod-liver oil alone if you need it. When your physician orders toast, do you breakfast on flour?

Pure cod-liver oil is hard to take and hard to digest. A man that can keep it down, can saw wood. He thinks he is sick; he is lazy.

We'll send you a little to try if you like.
SCOTT & BOWNE, Chemists, Toronto.